PETROLEUM WEEK

JANUARY 20, 1956

■ A McGRAW-HILL PUBLICATION

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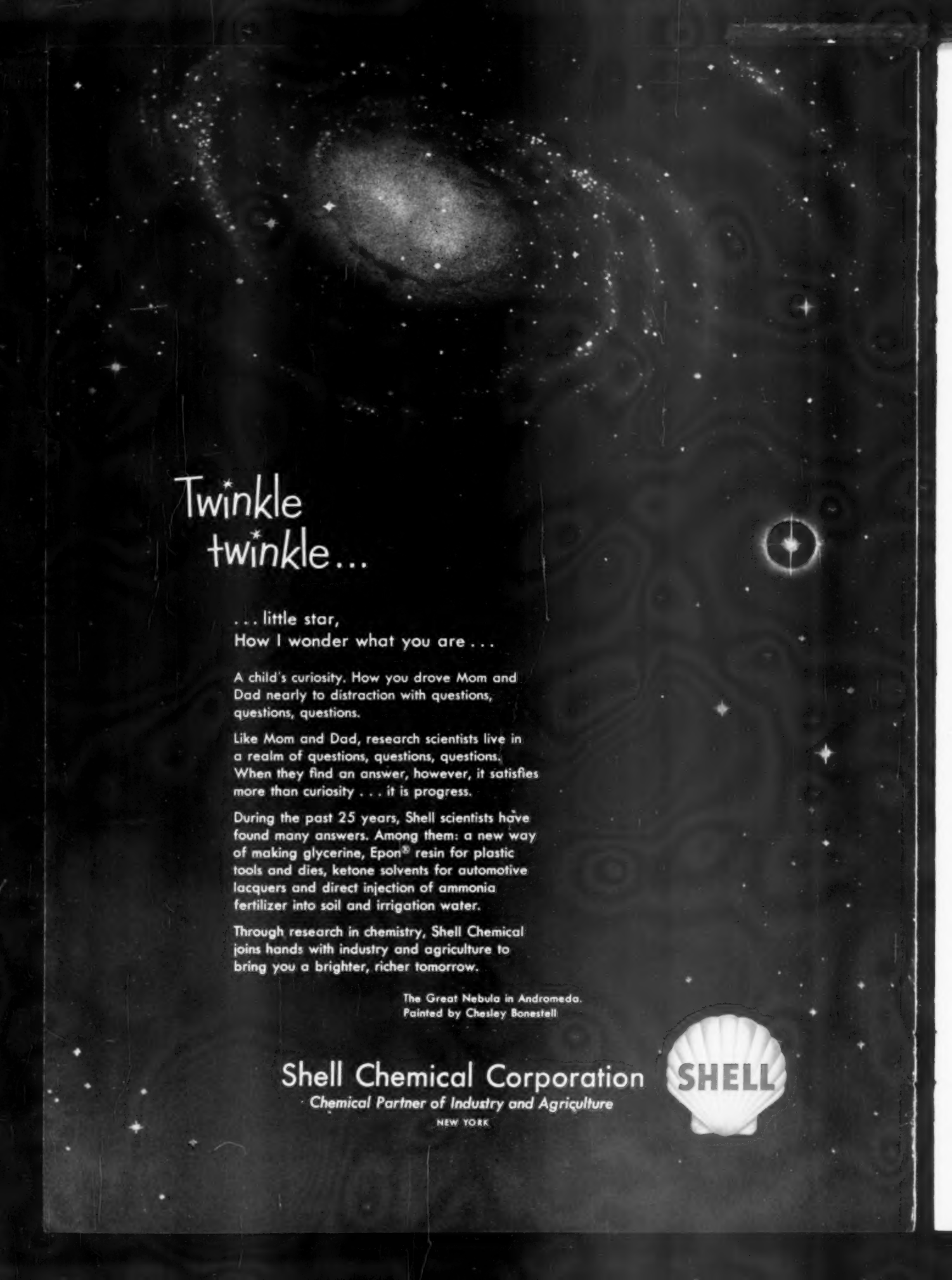
Twinkle
twinkle...
. . . little star,
How I wonder what you are . . .
A child's curiosity. How you drove Mom and Dad nearly to distraction with questions, questions, questions.
Like Mom and Dad, research scientists live in a realm of questions, questions, questions. When they find an answer, however, it satisfies more than curiosity . . . it is progress.
During the past 25 years, Shell scientists have found many answers. Among them: a new way of making glycerine, Epon® resin for plastic tools and dies, ketone solvents for automotive lacquers and direct injection of ammonia fertilizer into soil and irrigation water.
Through research in chemistry, Shell Chemical joins hands with industry and agriculture to bring you a brighter, richer tomorrow.
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The most important addition to Ethyl's advertising efforts is the inclusion of LIFE magazine in the schedule. And, of course, "Drive More" advertisements will also appear in The Saturday Evening Post, Collier's, and Reader's Digest. In 1956, each of the advertisements will reach about 50,000,000 people!

Many of the promotion materials . . . so effective in 1955 . . . will continue to be used this year. And new items are being added to the list. Some or all can be of help to you in making your own "Drive More" plans.

The greatest market potential ever awaits the oil industry in the coming year. With your help, "Drive More" can put more mileage on the nation's cars—and increase all service-station sales.

Again in 1956, Ethyl will have available suggested merchandising materials which you can use to put the program to work in your marketing area. In addition, you can develop your own promotion items—using the "Drive More" symbol in any way which seems most effective to you. Here are some suggestions along these lines:

1. **National advertising magazine reprints** can be posted in service stations and offices . . . or handed out in quantity to customers and dealers.
2. **Direct-mailing pieces** were used by many companies in '55. These companies found it an excellent way to tie the story of their own products and services to the "Drive More" appeal.
3. **Handout materials** can be distributed at service stations, touring bureaus, or through motels, hotels and other places benefiting from motoring.
4. **Exhibits and displays** are real attention getters at company, dealer, or industry meetings. You'll find service-station displays have real eye appeal for customers.
5. **Newspaper advertising** is always an effective means of hitting home. Mats and art work of the program symbol can be used to tie your own advertising to the national campaign.
6. **Television commercials** can tell the "Drive More" story very effectively. The symbol can be displayed during regular commercials, and special messages can be used at the end of programs without cutting down on commercial time.
7. **Radio commercials** can be used in the same way as TV. Public-service messages on the "Drive More" theme will not cut into commercial time allowed radio-program sponsors.
8. **Other tie-in suggestions** include many practical ways to work "Drive More" into individual advertising and promotional plans. Among these are postage-meter designs, billboards, local publicity, and shows. All of them can help make "Drive More","... one of the best known and most rewarding promotions yet devised."

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60-Second Summary / WHAT'S HAPPENING IN OIL

AT-A-GLANCE PETROLEUM WEEK

January 20, 1956

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All Western Hemisphere countries are exempt from the government's November request for a further 7% cut in imports. Defense Mobilizer Arthur Flemming made it clear this week that the exemption was not limited solely to Canada and Venezuela. . . . p. 10

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Something may be done this year toward revising octane ratings, which are shooting out the top of the present scale. The problem will get close attention at the May meeting of API's Division of Refining. . . . p. 38

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There's growing concern in Texas over exempt production, which permits some wells to operate free of allowables. Individually, they aren't important, but lumped together they make up more than one-fourth of the state's production. The Railroad Commission is going to start review of 417 exempt fields Feb. 1. . . . p. 11

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Improved techniques and better tools can keep an oil field bustling. The Permian Basin, for example, is showing an upward curve of activity by making the most of seismograph success, intensive use of accumulated information, and emphasis on improved fracturing. . . . p. 14

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Wide repercussions may develop from the Federal Trade Commission's attack on commission agreements between major oil and tire companies. FTC claims the fee, paid to a major for promoting handling of a specific brand of tires by its dealers, is illegal—and that it smacks of exclusive dealing. . . . p. 11

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The trickle of Canadian oil into the U.S. will soon become a big, fast-widening stream. Canada's production is growing rapidly, and most of the increase is U.S.-bound because it has nowhere else to go. The impact will be felt by most segments of the U.S. oil industry even in 1956. By 1960, that impact will become a real wallop. . . . p. 9

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More and more operating men are getting involved with research. The reason: It has become increasingly apparent that good research calls for cross-communication and cooperation between lab men and field men. . . . p. 24

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Small oil firms, as well as major companies, are playing an increasing role in aid-to-education programs. The Sico Co., a Pennsylvania marketing firm, has gone others one better: All its profits go to assist students. . . . p. 40

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Drilling in urban areas creates problems. Richfield hit oil in the outskirts of Los Angeles but can't produce it. . . . p. 15

Looking Ahead in Washington

McGraw-Hill
Washington
Bureau

January 20, 1956

The Administration wants a tighter rein on corporate mergers. This shows up in Eisenhower's budget message for 1957, and in testimony on Capitol Hill by Federal Trade Commission officials.

FTC's merger staff will be tripled if Congress goes along with the White House. FTC is worried by the rash of corporate mergers. It wants a chance to rule on mergers before they go into effect. And it wants authority to head them off with court injunctions. The oil industry, which has experienced a lot of merger activity recently, would be involved.

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The President intends to obey the congressional mandate on IOCC. The law extending the Interstate Oil Compact Commission requires the Justice Dept. to review the activities of the commission from the antitrust viewpoint. Eisenhower wants an enlarged Justice Dept. staff for this function. But it's too early to tell how vigorous the effort will be.

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Confidence that gas legislation will pass is increasing, although the present Senate fight is still touch and go.

The President is backing the bill. This gives courage to Republican fence-sitters. And it removes fears that Eisenhower will veto.

The gas distributors' campaign of opposition has backfired. Formation of the Council of Local Gas Companies gave producer strategists their first good target. The distributors are busy justifying their share of the residential consumers' gas bill. The final vote may come next week.

•

The Treasury Dept. endorses the principle of percentage depletion. But Secretary of the Treasury George Humphrey's recent statement that depletion is a "proper deduction" is not necessarily any comfort for oil and gas men. Reason: Humphrey failed to specify whether he considers the current rate of depletion allowances "proper"; he just affirmed that they aren't "loopholes."

•

The battle over highway financing is about to resume. Congressional leaders are largely agreed on a pay-as-you-drive approach, including new taxes on motor fuels. However, the influential American Automobile Assn. wants heavy truckers to pay more than a fourth of the tab—a position that truckers successfully opposed last year.

One key lawmaker thinks oil may be shortsighted on the issue. The industry still wants new roads financed from present revenues. Rep. Tom Steed (D., Okla.), who is on the committee that handles highway legislation, thinks oil should push for more highways, even at the cost of higher taxes. Better roads mean more driving and higher fuel consumption, he says.

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Congress will approve an atomic tanker this year. But the vessel won't be built before 1961. The President wants funds for construction of a commercially feasible atomic tanker and a nuclear-powered "freedom ship." Congress will go for the tanker, but is not sold on the need for the "freedom ship."

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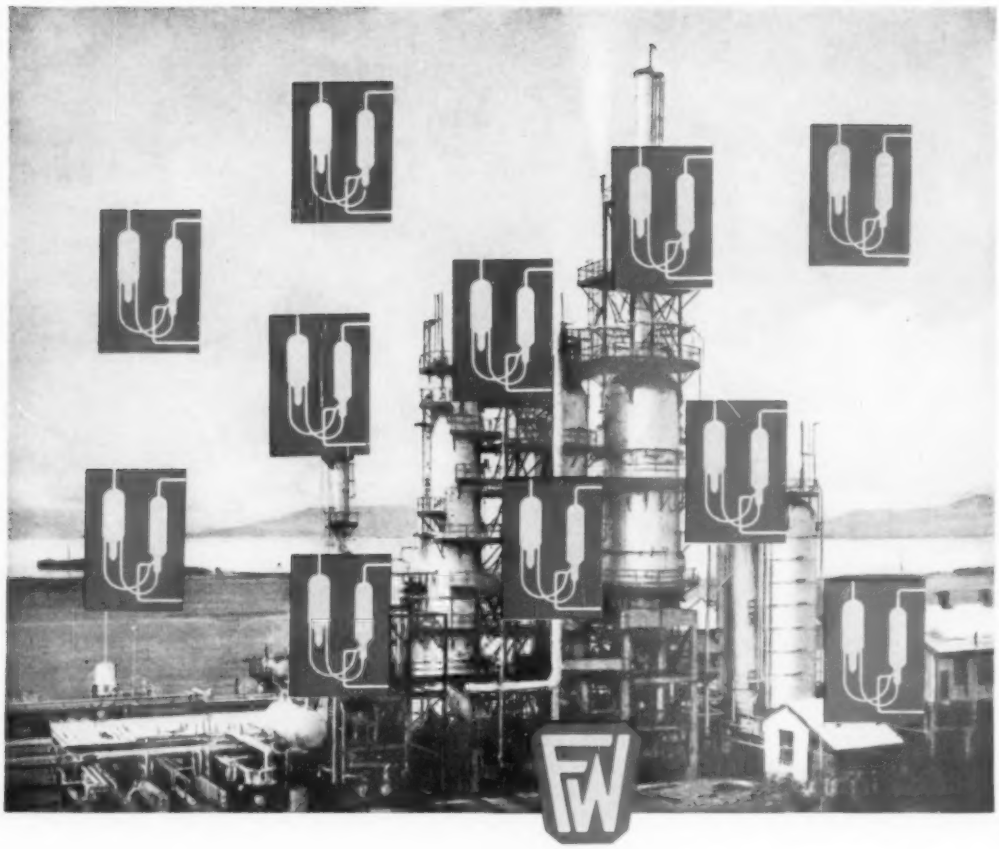

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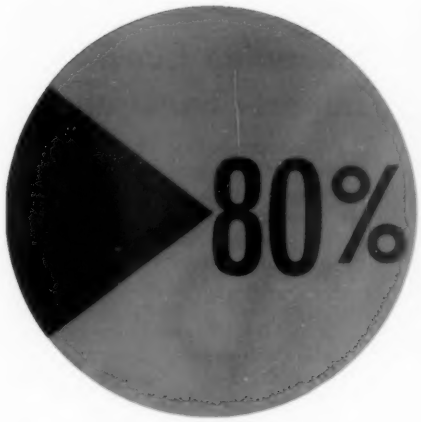

of the increase in Western Canada's crude output in '56 will come to the U.S.

The big push by Canadian crude for U.S. markets is now on. And because Canada's production is increasing at a record rate, the impact in the next few years will be substantial.

In 1954, Canada sent only 3% of its total western production to the U.S. Last year it sent 14.5%. This year it plans to send 26%.

The trend is even more strikingly evident when increases in production, rather than total production, are considered. Western Canada will export to this country this year 80% of the increase over its 1955 output.

Last year's exports from Canada to this country were about 55,000 b/d, and they are expected to increase rapidly to 150,000 b/d. By 1960, some forecasters predict that Canada will be needing outlets for as much as 450,000 b/d. And it will be looking for them chiefly in the direction of the U.S.

This is the reason for the sudden impact of Canadian oil: In the early stages of Canada's oil development, there was a ready local demand for the output. Before long, however, production in western Canada was increasing much faster than the available home markets could absorb. This made it necessary for the producers to seek outlets across the border for virtually all of the increase in production.

The need for U.S. markets is made even greater by the fact that Canada's eastern refineries are continuing to use foreign oil. They are doing so because it's cheaper to ship in crude by tanker than to haul it overland across Canada. Too, most of the eastern refineries own sources of foreign crude and therefore would be slow to switch even if Alberta crude were to become competitive in price.

The Pacific Northwest and the upper Midwest are the immediate targets for western Canadian oil. The U.S. Northwest, linked to the Alberta fields by the Trans-Mountain pipeline, is expected to absorb 58,500 b/d this year, an increase of 23,500 b/d over 1955. In the Midwest-Great Lakes region, served by the Interprovincial pipeline and its connecting lines, the U.S. market is expected to more than triple, reaching 54,000 b/d before the year's end.

Last week, for the first time, a tanker of Canadian crude was moved from Vancouver to California. The buyer is Tide Water Associated Oil Co., which will use the 120,000-bbl. shipment at its San Francisco refinery. Although this is significant, as the first Alberta-to-California crude shipment, it is not expected to inaugurate any major shift—at least not this year. But it is likely that some additional tanker movements will be made down the U.S. coast in the year ahead.

In the long run, all segments of the U.S. oil industry are apt to feel the pressure of Canadian crude. There simply isn't much of any place else the oil can go. Canadian consumption is increasing, and, eventually, eastern Canadian refineries may convert to Canadian crude. Even so, Canadian consumption will not keep pace with production and the U.S. will continue to be the outlet.

U.S. PRODUCERS, instead of having a Canadian market, will be facing competition from Alberta crude. In 1949, the U.S. exported 82,000 b/d to Canada. By 1955, this had dropped to around 20,000 b/d. And this year the Canadian market is expected to disappear almost entirely.

U.S. REFINERS will be affected, too. Refining growth has already begun in the extreme Northwest and in the Great Lakes region. In Minnesota and Wisconsin, for example, there are now five refineries with a total capacity of 59,000 b/d, compared with only 11,000 b/d three years ago.

Further refining expansion, utilizing Canadian crude, is expected in the Pacific northwest and in the Minneapolis-St. Paul area.

U.S. MARKETERS will be affected primarily in the regions where refineries are built to utilize Canadian crude. In some cases, marketers will have a wider range of suppliers from which to choose, and marketing competition generally may increase.

The growing availability of Canadian crude is attracting the attention of U.S. defense planners. As this nation leans more and more to a Western Hemisphere approach to the problem of a wartime supply of oil, Canada looms larger and larger in the picture.

This is affecting the U. S. decision on an emergency pipeline to the East Coast. Originally, it was felt that the Gulf Coast would be the source of supply. Now, however, the office of Defense Mobilization is giving strong consideration to a pipeline from the Midwest which would rely in part on Canadian crude (PW—Dec.2'55,p11).

It may also become a deciding factor on the proposed crude line from Texas to California. West Coast Pipe-

CANADA'S WINTER doesn't stop the rapidly increasing oil development there.

line Co. is seeking government backing for the line. But the growing availability of Canadian crude may cause ODM to withhold such support.

The government's oil imports policy has already been influenced by Canadian oil. In last November's request for an additional 7% cut in imports, ODM specifically omitted Canada and Venezuela. In future decisions, the weight of Canadian oil may be felt even more.

Obviously, these government actions could have a great deal of effect on the long-range planning by the U.S. oil industry.

The growth of the oil and gas industry in Canada—with U.S. companies playing a major role—has been phenomenal. Ten years ago, oil investments were running about $12-million annually. In 1955, they were $503-million. And this year they will reach $700-million or more, with some estimates as high as $843-million.

Canada's crude capacity may reach 1-million b/d by 1960. This would be an increase of 100,000 b/d annually over the current capacity. Actual production today, however, is running well below that capacity figure, partially because of a lack of markets.

Output increased 35% in 1955 to more than 350,000 b/d, and this year it's expected to rise to about 430,000 b/d. In 1946, production was 19,000 b/d.

Exploration and development continued at a record level in 1955 and are due to increase in '56. There were 2,879 wells completed last year—30% more than in any previous year. There were 158 new discoveries, including 90 oil, 58 dry gas, and 10 wet gas. Alberta led the provinces in well completions, 1,590, and in discoveries, 98.

Currently, western Canada activity is at an all-time high, with 255 rigs at work.

Increased activity in Alberta and British Columbia more than offset decreases in Manitoba, Saskatchewan, and the Northwest Territories.

Alberta has 189 active rigs, Saskatchewan 41, Manitoba 14, and British Columbia 10.

The annual "deep-freeze" of the Canadian northwest is the principal reason for a marked increase in drilling activity in northwestern Alberta, northeastern Britsh Columbia, and the Territories. Heavy drilling equipment can now be moved over boggy terrain that is impassable in summer.

The outlook for Canadian natural gas appears to be even brighter than that for oil, and the U.S. will be even more affected. This is emphasized principally by two important developments: (1) U.S. approval of Canadian gas as a supplemental supply to the Pacific Northwest's pipeline; and (2) progress in plans for the Trans-Canada gas line. The latter, which would link eastern gas markets with western production, would also sell to Tennessee Gas Transmission Co. for distribution in the U. S. (PW—Dec.2'55,p24).

Flemming Clarifies Imports Exemptions

All oil producing nations in the Western Hemisphere are exempt from the government's November request for a further 7% cutback in oil imports, Defense Mobilizer Arthur Flemming told Petroleum Week this week.

There had been some confusion over this point. The original Office of Defense Mobilization request had specifically exempted only Venezuela and Canada. But many observers felt sure ODM was, in effect, exempting all Western Hemisphere nations. The cut, it was felt, was aimed at Middle East imports principally.

Flemming verified that view this week when he told PETROLEUM WEEK that ODM will regard all Western Hemisphere imports on the same basis as Venezuela and Canada.

"I mentioned only Canada and Venezuela originally because imports from other Western Hemisphere countries were relatively small," he said.

However, the mobilization chief warned against any sudden upswing in imports from these countries. "If new reports show that these imports have reached such levels as to have appreciable effect on the total situation, we will take another look. I can't say what our decision would be."

Flemming earlier had indicated that imports from Venezuela and Canada, although exempt from the November reduction request, would be expected to continue at normal levels, and not be permitted to increase sharply.

Domestic producers have appeared to be generally agreeable to the Western Hemisphere policy. Some, however, have urged that care should be taken to guard against any substantial increase of imports of Middle East oil into Eastern Canada, to free more Canadian crude for export to the U.S. "We don't object to increases in imports based on Canada's increase in production," a Texas producer said, "but we will object if there's an increase in oil from Canada simply because Canada is importing more oil from the Middle East."

The hemispheric policy has the backing of the Defense Dept., on the ground that it would provide a more certain wartime source of supply.

FTC Moves Against Tire Deals

The Federal Trade Commission, after a long period of indecision, has finally decided to challenge the payment of commissions by tire companies to major oil firms for promotion of their tires (PW—Jan.13'56,p6).

Last week FTC issued three complaints charging that the so-called overriding commissions are illegal.

This is the system commonly used for many years: A major oil company encourages service stations which handle its products to stock a particular brand of tires. For this, the tire company pays the oil company a commission of from 5% to 10%. FTC is trying to break up the practice, which is also frequently used in connection with sale of batteries and other accessories as well as with tires.

Overriding commissions have been under attack for years, mainly by smaller tire companies, who charge they are prevented from selling to a huge market by the system. FTC has been studying the problem since 1949.

FTC says the agreements deny oil distributors and service station operators their right to choose freely the tires, batteries, and accessories they want to carry. The companies say it isn't so; that they do not pressure a dealer into buying items he doesn't want.

FTC's case adds up to charges that the companies are forcing exclusive dealing. But it is attacking the agreements as restraints of trade under the broad language in the Federal Trade Commission Act, rather than as the harder-to-prove exclusive dealing, under the provisions of the Clayton Act.

The complaints filed are specifically against agreements between B. F. Goodrich Co. and The Texas Co.; Goodyear Tire & Rubber Co. and Atlantic Refining Co.; and Firestone Tire & Rubber Co. and Shell Oil Co. But FTC also says similar agreements exist between each rubber company and other oil companies. In effect, FTC's charges, when finally decided, will determine the legality of the whole web of agreements it says exists between the three tire companies and half a dozen or more oil companies.

Though FTC does not show the combined value of the commissions paid, it gives a breakdown on some of the payments made to individual companies in recent years. The commission says, for example, that Firestone paid Texaco over $2.7-million in commissions on sales of tires, batteries, and accessories made through Texaco stations and distributors in 1953.

The oil companies say the commissions they get are justified by the merchandising and promotion services they provide through their sales staffs. The three tire companies have also denied that their arrangements are either illegal or harmful.

S. C. Bartlett, Texaco's vice-president in charge of domestic sales, says: "The Texas Co. feels that its sales commission plan is fair and proper, and that it serves the best interests of its dealers and the motoring public. We have recommended that our dealers purchase tires, batteries, and accessories from companies having national distribution because such companies carry a complete line of high-quality automotive products to meet practically all the needs of the motorist.

"However, our dealers are free to purchase tires, batteries, and accessories from any other source."

And J. G. Jordan, Shell vice-president, says: "Disruption of the present arrangement would certainly not mean lower prices for the public. Motorists will go on needing good supplies of TBA items, and good service for them. If Shell must discontinue its services, others will have to provide them. We do not believe the job can be done any more efficiently than the way we do it."

A spokesman for Atlantic has also issued a statement defending the long-standing commission practice: "It is disappointing that a plan widely used in industry for almost a century should be made the subject of legal attack in 1956. We shall defend our position forcefully. We are confident that the nebulous legal issues involved will be decided ultimately in our favor."

Texas to Review Exempt Wells

Almost 1-million b/d of Texas crude production will be involved in Texas Railroad Commission reviews of 417 exempt fields, beginning Feb. 1.

Texas regulates production by assigning a maximum daily production allowable to each well, then permitting it to produce only a specified fraction of that maximum rate in a given month. This fraction is set monthly by the Texas Railroad Commission in terms of the number of producing days allowed during the month.

But 417 fields in Texas are exempt from this "shutdown" limitation for one reason or another; in other words, they may produce at their maximum allowable rate every day in the month.

Exemptions are given to wells with discovery allowables, marginal wells, and wells with special problems.

As an incentive to exploration, the commission grants a discovery allowable bonus for 18 months, or until five wells have been drilled in a field.

The legislature has set a minimum daily allowable for marginal, or stripper, wells. This ranges from 10 b/d for wells of less than 2,000 ft. depth to 35 b/d for those deeper than 8,000 ft.

Most other exempt fields have some form of secondary recovery in progress.

Allowables for most exempt wells are small. But they hurt in a time of expansion.

The total number of producing oil wells in Texas increased by 9,601 during 1955 to a total of 163,294. Such a situation results in a hardship for owners of flush wells who must endure cutbacks when stocks are high and demand is low.

Exempt wells now produce more than one-fourth of the state's output.

As of Jan. 15, Texas allowables averaged 3,371,887 b/d. Of this, 982,657 b/d was assigned to exempt wells. This left 2,389,230 b/d actually subject to proration by the commission.

Engineers will make a field-by-field study of exemptions.

Some of the fields were exempted so long ago that present commissioners actually don't know why exemption was granted. Reservoir tests will be ordered in some cases, and those not deserving of exemption will be put in the proration pot along with all the rest.

Gulf Coast fields will be reviewed first. About 40% of this big district's output, or 189,299 b/d, is exempt from proration.

The state's biggest exempt allowable is 205,321 b/d in the Midland area of West Texas, which has many discovery wells and some highly productive secondary-recovery operations.

There is no intention of discouraging conservation projects.

"We're just going to reexamine these patients," says Railroad Commissioner Ernest O. Thompson. "The Railroad Commission has encouraged these conservation projects. People have taken thought-to-be depleted fields, producing less than four barrels per well daily, and built them up to 300 b/d producers."

What's New / IN THE INDUSTRY

Ask Pay Hike at Whiting

The Independent Petroleum Workers of America Union has called on Indiana Standard management to make 11 major changes in wage scales and working conditions at the Whiting (Ind.) refinery.

IPWA bested the Oil, Chemical & Atomic Workers International Union by a four-to-one margin last week in an election to determine the bargaining agent for the refinery's more than 6,000 employees. The IPWA victory came despite an intensive, year-long organization drive carried out by OCAW. An OCAW spokesman says, however, that the union will continue its membership campaign in the hope of another election next year.

IPWA is moving swiftly with the new demands because its present contract at Whiting expires Mar. 1. Topping the list of objectives is a 30¢ hourly wage increase.

Other demands include higher shift differentials, improved vacation plans, triple time for holidays (as well as adding two more holidays), a union shop, and time and a half for Sundays.

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Union Opposes New Law

Union Oil Co. of California has loosed public criticism against Richfield Oil Corp.'s proposed oil conservation law. The proposed law, which Richfield hopes to place on the state ballot as an initiative measure next November (PW—Jan.13'56,p9), allows for unitization of a producing pool if it's agreeable to owners of 75% of the surface area of the pool.

A. C. Rubel, Union vice-president, hit this "majority-rule" unitization and said, "to force the operator into such a unit against his will is plain confiscation, even if blessed with a sprinkle of conservation."

Union is the only major company in California so far to go on record against the measure. Since its announcement by Richfield, Shell, General Petroleum, and Continental have publicly announced support of the bill.

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Approval of Sale Likely

The Synthetic Rubber Disposal Commission sent to Congress last week a report which is likely to assure Congressional approval of the purchase of the Institute (W. Va.) synthetic rubber plant to Goodrich-Gulf Chemicals, Inc.

Goodrich-Gulf bid $11-million for the biggest—but least desirable—of the government's plants. The commission, which negotiated the sale, has sent to Congress a report supporting its action.

The commission report spikes any arguments that the sale to Goodrich-Gulf is a GOP "giveaway" to big business. The second-best offer, the report reveals, was $5.8-million by independent oil man Edwin W. Pauley. The commission ruled that Pauley's offer "was not the full fair value" of the plant. Other bids ranged from $750,000 to $4-million.

Sen. J. W. Fulbright (D., Ark.), chairman of the Senate Banking Committee, said the $11-million bid "sounds pretty good" for a long-idle "white elephant," which drew no bids whatever when first offered for sale in 1954.

Goodrich-Gulf will take possession of the plant in mid-February, barring a veto by either the House or the Senate in the next 30 days. Committee hearings in both the Senate and the House are a virtual certainty.

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Mecom Makes Purchases

John W. Mecom, a Houston independent oil operator, this week bought control of a pioneer Kansas manufacturing firm, and a one-half interest in a 140,000-acre concession on the island of Gonave, off the coast of Haiti.

The manufacturer is Cardwell Manufacturing Co., Inc., in the drilling and servicing equipment field since 1926.

The concession interest was purchased from Mark Edwin Andrews, of Houston. Purchase prices in the transactions were not disclosed.

Mecom expects to retain all of Cardwell's 400 employees except H. W. Cardwell, Sr., the president; and Mrs. M. H. McKee, vice-president and treasurer, who asked to be relieved of their responsibilities. H. W. Cardwell, Jr., will remain in a managerial capacity.

The Gonave concession was purchased by Andrews from Commonwealth Oil Co., of Haiti, in which two other Houston men, John H. Blaffer and C. Burton Liese, are interested. Commonwealth retained approximately 45,000 acres on the island.

A spokesman for Andrews says Gonave Island is a large anticline structure thrusting up from the ocean. It is considered one of the largest known structures yet undrilled.

Andrews and Mecom also have an option on approximately 120,000 acres on the mainland of Haiti. Commonwealth holds about 300,000 acres on the mainland.

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The U.S. Court of Appeals has ordered an oil company to bargain with its union on a voluntary stock-purchase plan for employees. The court, by a 2-1 vote, last week upheld a National Labor Relations Board order that Richfield Oil Corp. bargain collectively on the matter with the Oil, Chemical & Atomic Workers Union. If it stands, the precedent-setting order could affect all oil companies that now have employee stock purchase plans.

Richfield spokesmen, however, say the case will be carried to the Supreme Court for review. A company statement declared that "principles involved in the decision are vitally important in the preservation of the right of business owners under the American free enterprise system."

The union had accused Richfield of unfair labor practices for refusing to bargain collectively on the stock-purchase plan. Richfield insists that the company-inspired plan is not a form of wages, or terms of employment, and therefore not a proper subject for bargaining. Richfield had put the plan into effect July 1, 1953.

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The government is going to continue its effort to put a quantity limit into effect on tire discounts.

The Justice Dept. has appealed a federal district court's ruling, which threw out the Federal Trade Commission's attempt to enforce the rule.

FTC's quantity discount rule would prohibit a tire company from giving a purchaser a discount larger than that given on a single freight carload. This would be a blow at major distributors, including major oil companies, who buy in large quantities.

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A plan to give new financial impetus to the West Coast Pipeline Co.s' proposed 30-in. crude oil line from Texas to California is getting

little backing from California oil firms which had been asked to participate. The pipeline company had offered to sell some of its stock to West Coast companies if they would agree to ship a minimum of 30,000 b/d through the proposed line (PW—Jan.13'56, p13).

John B. Mills, new president of the pipeline company, said early this week that most of the replies received up to that time were not favorable. This apparently leaves the fate of the project largely in the hands of the Office of Defense Mobilization, which has been asked to classify it as essential to defense. This classification would make the pipeline eligible for government financial backing.

Mills said he has a tentative agreement from the House Armed Services Subcommittee to testify before it on Jan. 23. He said he would present "new" evidence at that time on "nation defense aspects" of the proposed line.

Capital needs for the line were placed at about $113-million, up about $7-million from the previously proposed 24-in. line.

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There won't be any decision by the Office of Defense Mobilization on an East Coast pipeline for at least two weeks. Mobilizer Arthur Flemming, who said earlier he would have a policy decision by Jan. 15, postponed his decision until his return from a European trip. Flemming is due to return from the 10-day trip on Jan. 28.

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The Federal Power Commission will begin hearings Feb. 14 on imports, and exports, of natural gas from, and to, Canada by two American Companies. The two companies—Tennessee Gas Transmission Co. and Midwestern Gas Transmission Co.—are expected to face considerable opposition at the hearing from the National Coal Assn., the United Mine Workers, and from domestic natural gas companies whose markets would be threatened (PW—Nov.25'55,p24).

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The W. K. M. Manufacturing Co. of Houston, a wholly owned subsidiary of A. C. F. Industries, Inc., of New York, is considering the purchase of Key Co. of East St. Louis, Ill. Key Co. also is an A. C. F. subsidiary. W. K. M. manufactures high-pressure steel valves for oil field and pipeline equipment.

Key Co., manufacturers of oil refinery parts and equipment, probably will occupy quarters at the new W. K. M. plant at Missouri City, Tex., near Houston. The plant, which covers more than 10 acres, will be completed in about two months.

J. S. Downs, executive head of W. K. M., says, however, that the plant is designed to handle the operations of only two companies, W. K. M., and A. C. F. plug valve division of Detroit, which W. K. M. purchased last year.

A. C. F. Plug Valve, manufacturer of low-pressure valves, has been moving to the Houston area for the past two months.

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The Defense Dept. says no change in the present post exchange program is planned, despite recommendations by the Hoover Commission. The commission had recommended closing of military service stations in areas adjacent to civilian facilities. The department defended the stations as part of post exchange activities vital to life in military communities, and said a transfer of such activities to private groups would cause increased prices.

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The Senate has been urged to oppose a recommendation that 50% of U.S. oil imports be carried in U.S. flag vessels. In a letter to each senator, Francis T. Greene, president of the American Merchant Marine Institute, said the Independent Tankers Assn., which made the proposal, should not be mistaken as representing management. Greene said ITA comprises "a limited group of independent and unaffiliated maritime labor organizations." He added that the recommendations should not be confused with Public Law 664, which contains provisions that 50% of all government-financed cargoes be carried in U.S. flag vessels.

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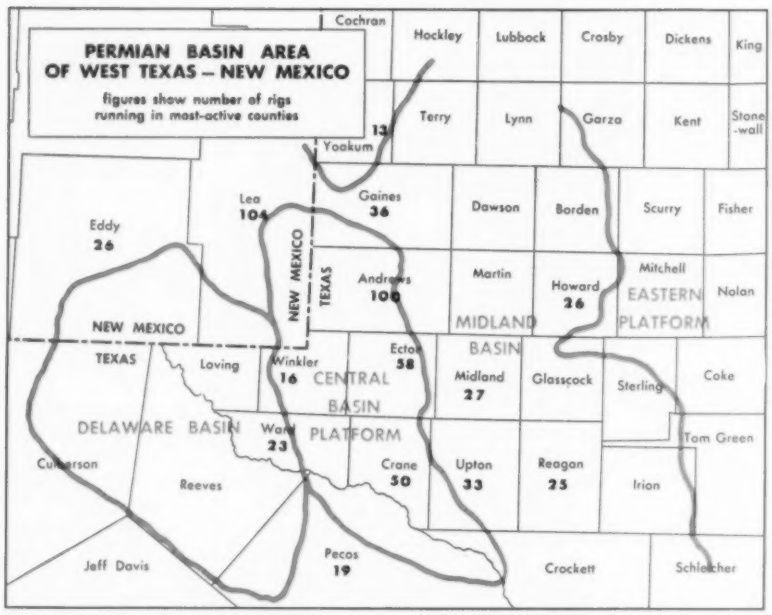
World crude oil production averaged 15,298,000 b/d last April, a 0.5% increase over the previous month, according to the Bureau of Mines. The report was released just last week, and is the latest available. It showed that production in the Middle East amounted to 3,352,000 b/d, an increase of 2.3% over March. Venezuelan production, at 2,146,000 b/d, remained unchanged.

World crude runs to stills (exclusive of Soviet Russia and Eastern Europe) averaged 13,041,000 b/d in April, the bureau reported, compared with 13,266,000 b/d in March.

Tanker Runs Aground, Blocks Canal

The 556-ft. tanker Amtank is shown stuck fast last week at the Delaware end of the Chesapeake & Delaware Canal. The 18,000-ton vessel's bow touched the north jetty, and her stern the south jetty, thereby blocking all ship traffic through the canal for 21 hours. Several ships reportedly detoured about 300 mi. around Cape Henry before the Amtank could be freed. National Bulk Carriers, Inc., of New York, owner, said the Amtank ran aground because of poor visibility (it happened near midnight), adverse winds and bad weather. The tanker, enroute from Philadelphia to Baltimore for repairs at the time, was refloated at high tide after ballast was shifted. Several tugs also aided in breaking the tanker loose. No one was injured.



1956 looks like a . . .

Bright Year for Permian

The Permian Basin of West Texas-New Mexico is pushing to a new kind of peak in activity through the continuing success of improved tools and techniques.

The present bustle is unique for the complete absence of the "boom" areas that have characterized the development of the basin, from the time of the Wink play, and beyond, up to the Scurry Reef and Spraberry Trend developments—which, during their height, kept approximately 300 rotary rigs busy.

A recent comparison of active rotary rigs reveals that most of the gain during a 12-month period was spread over ten counties: Andrews, Borden, Crane, Ector, Gaines, Midland, Nolan, Upton, and Ward, in Texas, and Lea, in New Mexico. None had gained more than 17 rigs during the period.

Activity is tracing a gradual upward curve.

In August, there were 544 active rotaries, an increase of 91 over the same month in 1954; in October there were also 544, an increase of 80 over a year earlier; in November there were 610, an increase of 115; and in December, 621, a gain of 133.

Moreover, there are no signs of a letup.

A check last week revealed 17 wildcats and 83 field wells drilling in Andrews County, 11 wildcats and 39 field wells in Crane, 13 wildcats and 45 field wells in Ector, 17 wildcats and 19 field wells in Gaines, 3 wildcats and 23 field wells in Howard, 4 wildcats and 23 field wells in Midland, 12 wildcats and 7 field wells in Pecos, 2 wildcats and 23 field wells in Reagan, 8 wildcats and 25 field wells in Upton, 5 wildcats and 18 field wells in Ward, 4 wildcats and 12 field wells in Winkler, and 5 wildcats and 8 field wells in Yoakum, all in Texas; and 10 wildcats and 16 field wells in Eddy, and 12 wildcats and 92 field wells in Lea, both in New Mexico.

Basin programs indicate that even more money will probably be spent on exploration and development this year than last. Many operators are making deals with land and minerals owners that they would not have considered a few years ago.

Seismograph successes are one factor in the upswing of confidence.

Improved techniques are making it possible to pin down medium-sized or small structures and oil traps which heretofore were missed.

The "pattern-shooting" technique for better interpretation of deep formations is credited with the discovery of several Devonian and Ellenburger fields that had not been indicated by previous practices.

Intensive use of accumulated information is also paying off.

A vast amount of subsurface information has been collected during the past 10 years from wells drilled over the area. That knowledge, among other advantages, makes it possible to locate productive stratigraphic traps.

Fracturing is contributing very heavily to the basin's success.

Exploration and production executives think the basin's benefits from fracturing are just beginning. They say that vast improvements have already been made in the technique, and they expect still further advances, which will lead to even better results.

Improved fracturing is bringing in oil wells from shallow zones which were passed up in drilling to deeper pays in old wells.

In the Means area of Andrews County, which was first developed from the Grayburg-San Andres formation at 4,400 ft., the Queen sand at 4,000 ft. is now paying off.

The McFarland (Queen) field, the Shafter Lake (San Andres), the Martin (San Andres), and recent important extensions to the San Andres and Glorieta producing areas in the Fuhrman-Mascho field, all in Andrews County, have resulted from fracturing.

Other such examples are to be found in Borden, Crane, Upton, North Crockett, Ector, Howard, Mitchell, Midland, Glasscock, and Reagan counties.

Fracturing is also making oil wells from slightly stained sections in deep formations.

An example is a recently completed 500 b/d Devonian well in the Headlee field, Midland County. When originally drilled through and tested, the Devonian yielded no fluid and only a slight show of gas.

Dry wildcats, drilled several years ago with cable tools, are being cleaned out, fractured, and completed as flowing wells.

In 1951 two such holes were reentered, fractured, and completed as producers. In 1952 there were three such completions in the region; and in 1953, two. In 1954 there were 14.

Dry-hole samples that have lain in warehouses for 20 years are being studied for oil stains which might respond to fracturing.

Many geologists and engineers now believe that the fracturing technique will ultimately be so efficient that any oil-stained section on or adjacent to the Central Basin platform can be made productive.

Urban Discovery Brings Lots of Woe

After ten years of effort and six dry holes, Richfield Oil Corp. has a townlot discovery it can't produce and 825 partners who couldn't care less.

The Boyle Industrial Community 1-1 was completed late last month flowing 25.7-gravity crude through 12/64-in. choke at the rate of 170 b/d from 3,130-492 ft. Location is at 4th and Breed Sts., just across the Los Angeles River from downtown Los Angeles, in a crowded, down-at-heels neighborhood known as Boyle Heights.

The well was shut in because of an ordinance requiring that crude be moved only by underground pipeline.

The nearest crude line is 3 mi. distant, past oceans of humanity and mountains of concrete and steel. So Richfield will take at least one more good long look before increasing its investment. Ben Owens Drilling Co. has skidded the rig over a few steps, and this week spudded an offset on the 150x160-ft. site.

Richfield has been exploring in the area since 1946.

Six failures were drilled within about a one-mile radius of the discovery. Though the company will make no official estimate of how much it has invested in the long campaign, it is reported to have spent more than $500,000 in the current development.

Actual drilling operations have been pleasant interludes between the labors of leasing and the debates before the city council.

Drilling in Los Angeles requires long preparation. The city's laws are designed to prevent any area within its limits from becoming a forest of derricks.

Richfield had to lease 51% of the Boyle Heights area before it could ask the city council to start the machinery which eventually led to the establishment of a drilling district.

It required a year and a half for a crew that sometimes numbered 25 men to sign up property owners in a 210-acre tract.

Richfield holds about 1,500 leases in a 500-acre patch of Boyle Heights, from which the actual drilling district was carved.

Property owners in the drilling district will share a one-eighth royalty on the oil eventually developed. The 825 who leased their land for the nominal $1 fee will receive monthly royalties from the beginning of production.

The company's claims that operations would be unobtrusive caused hot dispute at the city council hearings.

Objectors said oil development would lower real estate values in the neighborhood and would constitute a nuisance.

Richfield's answers were contained in a persuasive booklet setting forth that:

- Operations would be noiseless because of the soundproofed derrick and electric-powered machinery.
- Slant drilling would permit a minimum of drill sites.
- There would be no storage tanks.
- All producing equipment would be placed underground (see sketches on page 16).

Even Richfield was surprised at how unobtrusive the operation turned out

THE SHADOW of the soundproofed rig (below) falls somberly across Boyle Heights (above) in the city of Los Angeles. It's a dramatic symbol of the troubles Richfield Oil Corp. will have as it goes about developing the urban area.

to be. It was so inconspicuous, in fact, that neighborhood lethargy was not even ruffled when a newspaper cried "Gusher!"

Such blaring broadcasts of the discovery aroused fears that the 825 partners would immediately visualize themselves as 825 millionaires.

But a PETROLEUM WEEK reporter could find no property owner who believes he will receive more than $10 to $20 a month at the most. (In a letter to prospective lessors, Richfield had estimated that royalty income could run as high as $67.50 per month for the owner of an average size one-fifth-acre lot if the drilling district yielded twenty 300-bbl. wells.)

Louis Pianta, whose 120x150-ft. lot is part of the drilling district, figures he might get "a couple of bucks" out of the deal. He says he signed the lease only because "the guy wouldn't go away. I leased it before and I didn't get anything out of it."

The Boyle Heights project indicates the intensity with which oil is being sought in California.

Townlot plays such as this were once too bothersome and expensive to attract interest. But as oil becomes harder to find, the lease men are roaming into the cities. In one week-long effort, Richfield recently put almost the entire town of Oxnard under lease, paying an estimated $500,000 in bonuses.

Caution on Pacific Front

SECOND OF TWO PARTS

Oil activity off the California coast will get under way in earnest this year, now that the state legislature has passed a bill opening some areas off Southern California to lease bidding (PW—Jan.13'55,p14).

But a word of caution is in order: The Pacific waters will be no place for small operators. The reason is that most of the drilling will be done in water 150 ft. to 200 ft. deep.

So Pacific wildcatting will be primarily a gambit for giants who can afford to operate from permanent platforms that may cost as much as $3½-million.

In the beginning, engineers planned structures which would operate in 600 ft. of water. But these designs have been moderated (with the exception of some imaginative proposals that at present must be classed as tools-for-tomorrow, however sound their engineering principles may be).

Most operators consider 300 ft. as the practical outside limit for devices available in the near future.

The majority of Pacific deep-water structures will be quite similar to those used in the Gulf, except that mobile platforms of present design probably will not be used.

Aside from the water depths, the submersible would be severely handicapped by the Pacific's slanting bottoms, rough waters, and exposed rocks in shallow areas.

Moreover, the comparatively inexpensive deep coring barges, when used as advance scouts for permanent platforms, would seem to obviate the need for submersibles.

Economics of the coring barges are still being worked out, but there is plenty of evidence to encourage their use. To acquire and convert a wartime LSM, like those being used by California Standard and Richfield, costs about $500,000, only about 15% of the cost of a movable platform that could operate in 300 ft. of water.

The California platforms will probably be boosted 50 ft. above the water to clear high waves. Lateral bracing against earthquake stress will be about the same as the bracing against hurricanes in the Gulf.

One factor being intensely emphasized by rig designers is safety. Reason: A blowout or some other major mishap could set back California offshore development a whole generation.

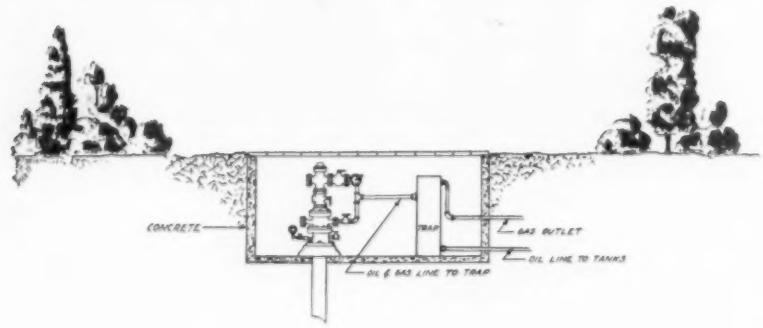
A paramount obstacle to oil's long effort to develop California offshore reserves has been the opposition of shoreline cities, property owners, and conservation groups, who fear despoilation of the surf and beaches.

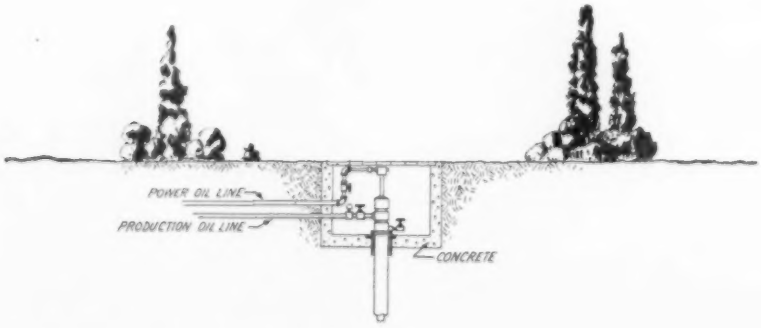
The industry and its supporters, notably a sympathetic governor, finally overcame this stout bloc by pointing out that the state is depending on imported crude when it probably has plenty of its own right offshore, and by insisting that there is little danger that modern operations will harm the beaches.

Nevertheless, the law, when finally passed, was loaded with restrictions designed to protect property owners. Still antagonistic, this group could be expected to seize upon any major misadventure and file enormous damage claims.

The desire for safe, efficient operations is popularizing the already-proven island method.

Monterey and Texaco pioneered this technique with their $500,000 structure 1½-mi. off Seal Beach. Begun in 1953, the 75-ft. diameter island was designed for a life of 50 years, long enough to drain the productive area, which is 2 mi. long and 3,000 ft. wide. The island now has nine producers in a program to drill 70 wells,





UNDERGROUND location of flowing equipment (above) or pumping equipment (below) is extra expense of urban drilling. Site-beautification with trees is another.

and Monterey says 75 wells are possible.

Richfield is planning a larger, natural-appearing island at its state lease off the Rincon field in Ventura County. Humble and Seaboard plan another off Newport Beach.

But islands won't be used for deep drilling.

The probable water-depth limits of the island technique are in dispute. E. E. Pyles, Monterey vice-president and an authority on the island method, says that 60 ft. of water seems to be the economic limit. Others maintain that the limit is far from being defined. The expense of building an island in deeper waters, they say, might be offset by greater stability, more working room, resistance to corrosion, and more flexibility of operations.

Whatever the tools used, the oil search will likely be concentrated in three general areas in the immediate future.

All three are within broad geologic structures containing oil fields ashore. One structure contains the low-gravity Santa Maria and Guadalupe fields. The second, running to sea across the shorelines of Santa Barbara and Ventura counties, contains the Ventura Avenue and related fields. And the structure encompassing the prolific Los Angeles Basin is also considered a good bet.

California's submerged lands have already yielded about 450-million bbl., all from directional drilling ashore except at the Sea Beach island and some pre-1938 piers.

From 1894 through 1954, nearly 264-million bbl. were produced from state-owned lands. There are now about 560 wells producing from state-owned tidelands and submerged lands in six fields along the California coast.

Two cities, Long Beach and Newport Beach, have developed production from their own submerged lands. The Newport Beach production is insignicant, but the Long Beach lands yielded 196,205,441 bbl. from 1939 through June 30, 1954.

Five years is considered an acceptable guess of the time necessary to develop sizable offshore production.

In 1953 the California subcommittee of the National Petroleum Council on submerged lands capacity estimated that if California's offshore drilling laws were altered (as they now have been) about 100,000 b/d could be developed in five years.

That five years is now running. But during the months just ahead the companies will be occupied principally with keeping eyes on the design boards—and on one another.

TRIM, SPEEDY CRAFT such as this are joining the Gulf fleet in response to need for . . .

New Designs in Service Ships

Construction of smaller service vessels for Gulf of Mexico operations is entering a new phase as ships of improved design replace the fading units that have been in use since shortly after World War II.

When the Gulf quest began in earnest during the last decade, the companies were forced to use whatever craft were available or could be converted. Not all of these were satisfactory because they were designed for other work, or because they failed to combine the sturdiness needed during bad weather and the maneuverability for safe docking offshore. Like the bigger components of the offshore fleet, such as tenders, these smaller units are now in short supply.

Further, the Coast Guard is drawing up new regulations that will require expensive alterations of many older vessels.

Coast Guard rules were originally written to cover ocean-going liners and freighters in conventional service. These regulations were applied "by the book" against the small craft until the oil companies protested and obtained several adjustments in the more-than-50-volume set of regulations.

As they now stand, the regulations already set forth rigid specifications which can force an outlay of as much as $40,000 per vessel for comparatively minor items.

So today, the older vessels are giving way to trim craft built especially to meet unique demands of offshore operations.

Typical of the new fleet is the "Oil Service," an 82-ft. unit launched recently by Calcasieu Shipbuilding Corp., of Lake Charles, La., for Sea Service, Inc., of Harvey, La. Sea Service was organized by W. H. Henderson, formerly of Kerr-McGee Oil Industries, Inc., a pioneer in offshore work.

Henderson drew on his past experience to help design a vessel suitable for offshore hauling. He has launched 15 of the special craft so far, and more are on the ways.

Henderson's newest vessel is equipped with the latest in communication facilities, can do more than 13 knots, and has an all-steel welded hull. It accommodates 36 passengers and a crew of three. Its twin screws provide maneuverability, and its speed means economy when delivering crews or equipment to distant locations.

Henderson's new cargo carrier is said to be the first ship of its size and tonnage to be built especially for offshore oil field hauling. Each vessel is 135 ft. long and 32 ft. wide, and is powered by two 600-hp. diesels.

With its steering apparatus on the foredeck for increased visibility, and with the power of its engines, the carrier can be maneuvered alongside any offshore rig in a minimum of time and in any kind of weather short of a full-scale hurricane. The ship can service as many as three rigs within 12 mi. of each other.

Calcasieu Shipbuilding is another example of the new industry being fostered by offshore activity. In existence two years, the company has been principally engaged in building barges. Henderson's ships are the first seagoing vessels to be constructed in the Calcasieu yards.

Walter Bennings, of Calcasieu, says this type of vessel has interested several offshore operators. "All of them," he declares, "are talking about big boats with ranges of 100 mi. or more." Henderson's boats had to have this range because they will be used to service a rig located approximately 86 mi. offshore.

Safety Visual Aids Can Save Lives

SAFETY REPRESENTATIVES at Shell Oil Co. have devised several "safety visual aids" to reduce accidents among exploration and production employees in the Calgary area. The aids have proved effective because they enable the employees to see for themselves the price they might have to pay for ignorance, or disregard, of safety practices in field operations.

The visual aids, devised by Shell safety representatives Frank Hall, M. E. Falby, and A. V. Tone, are taken on periodic tours of field locations. A safety hat "tester" (right) is one of the aids most frequently shown. Other units demonstrate safety goggles and shoes, fire-fighting equipment, and detection of flammable vapors.

Shell employees get a laugh—and a warning—out of a dramatically simple, but effective, demonstration of the value of safety hats. After the usual drop test is made (right), the safety hat is removed and a coconut is placed in its stead under the tripod. The 10-lb. weight shatters it.

When a 10-lb. weight is dropped, it dents the safety hat, but doesn't fracture the wooden "skull" beneath.

A small pumper is used to show the proper way to ground electrical equipment, to minimize ignition or shock dangers.

The visual aid explains the operation of an explosimeter, which determines the flammability of vapor-air mixtures.

The safe way of blocking control mechanisms on various equipment, when necessary, is shown on the panel.

A pellet from an air pistol shatters unsafe goggles on a dummy head. A safety glass lens does not break.

What's New / IN EXPLORATION, DRILLING, PRODUCTION

Producing Properties Sold

Producing properties in Texas, Oklahoma, and Louisiana have been sold in three transactions.

Great Sweet Grass Oils, Ltd., of Toronto, bought 48 producing oil wells and 8,400 acres of undeveloped leases in five Oklahoma areas as its first venture into the Mid-Continent area. The property was acquired for an undisclosed sum from the Depositors Mutual Oil Development Corp., an Oklahoma firm organized to consolidate properties of Jordan Petroleum Co., Exchange Oil Co., Eugene and Julia Jordan, and Roy Hoffman, all of Oklahoma City, and A. R. Jordan, of Hugo, Okla.

King Oil, Inc., of Wichita Falls, Tex. has sold its oil and gas producing properties in Texas and Oklahoma to Fremont Uranium Corp., of Denver. The holdings produce more than 300 b/d. King stockholders took Fremont stock in the deal, with no cash involved.

Producing Properties, Inc., of Dallas, acquired from Lucerne Corp., also of Dallas, a working interest in 14 leases in the DeQuincy field, Calcasieu Parish, La., the Dyersdale field, Harris County, Tex., and the North Thompson field, Fort Bend County, Tex.

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New Firms Set Up

Organization of two new producing firms was announced last week, one on the Gulf Coast and one in the Rocky Mountains.

O. S. Wyatt, Jr., of Corpus Christi, announced the organization of Coastal States Oil & Gas Co. The firm was incorporated to acquire, develop, and operate interests in oil and gas properties and gathering systems owned principally by Wyatt and Abe Epstein, of San Antonio.

Coastal States acquired producing properties valued in excess of $7-million from the various incorporators. The principal properties acquired had been developed and operated by Wymore Oil Co., a partnership composed of Wyatt and A. A. Moore, organized in 1951 under a joint-venture arrangement with Epstein and others.

Shawnee Oil Co. was incorporated at Denver for operations in northeastern Colorado and the Nebraska Panhandle. Directors are Frank O. Prior, Jr., Robert E. Chancellor, and I. J. Gefroh, all of Denver.

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Drop in Revenues Cited

Nonintegrated oil producers in California have suffered a 9% loss in revenue while their costs have increased 20%, R. R. Von Hagen, president of Oil Producers Agency, said in a letter to agency members.

The nonintegrated companies operate approximately 51% of the state's wells and have 39.4% of the production. Based on statistics for September, 1955, they were operating about 17,380 wells with a total of 381,850 b/d of production, or 22 b/d per well. Their per-well income was, therefore, about $55.22 per day.

By contrast, this group had an average income of $60.51 per well per day in 1953.

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To Explore Florida Lake

U. S. Army engineers at Jacksonville, Fla., have issued a permit to Standard Oil Co. of California and subsidiaries for seismic work on Lake Okeechobee.

Chevron Oil Co., subsidiary of California Standard, has opened an office in Pahokee, on the east side of the lake, to supervise the work.

Plans call for gridding the lake into sections 2 mi. square, with one boring authorized in each. Some areas are restricted to avoid interference with navigation, but the permit is believed to cover enough territory to give a reliable picture.

The lake has an area of 730 sq. mi. and a maximum depth of 14 ft.

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A bill to strengthen the authority of the Colorado Oil & Gas Conservation Commission has been introduced in the legislature.

The bill was requested by Gov. Ed. C. Johnson (PW—Jan.13'56,p9) after operators in the Rangely field failed to agree on a gas reinjection program.

The measure, offered by Sen. Sam T. Taylor, was referred to a mining committee headed by Sen. D. R. C. Brown, who recently opposed the confirmation of Warwick M. Downing, of Denver, for a new term on the commission. Downing was nevertheless confirmed. He had recommended to the governor that the commission be given more authority.

The bill would amend the present law to give the commission "authority to prevent waste and protect correlative rights of all owners in each and every field and pool" if the commission found that an emergency existed. Where "irreparable harm may occur," the agency could stop production of oil and gas in any field or pool, if the bill passes.

Sen. William Albion Carlson, the majority floor leader, said he hadn't read the bill, but that he would oppose "any attempt to use conservation as a wedge to create market demand proration."

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Optimism over a proposal to unitize the Cheyenne River, or southern, portion of the Greater Clareton field, Weston County, Wyo., was expressed by State Mineral Supervisor George W. Jarvis.

A tentative article of agreement was presented at a Newcastle meeting attended by approximately 40 interested parties. The area comprises about 4,000 acres and has about 60 producing wells.

"If this unit is successful," says Jarvis, "it would point the way to unitization, piece by piece, of much of the remainder of Clareton." A study of the field by Core Laboratories, Inc., of Dallas, concluded that Clareton will be a stripper field by 1959 unless conservation measures are applied.

•

Belco Petroleum Corp. and El Paso Natural Gas Co. have opened gas areas in Sublette County, western Wyoming, in anticipation of the Pacific Northwest Pipeline.

Belco revealed completion of a 20-well program at Big Piney. Ten produced from the Almy formation and the others were dry. No official reports were released on the wells, though one is credited with a potential of 2.8-million cu. ft. per day.

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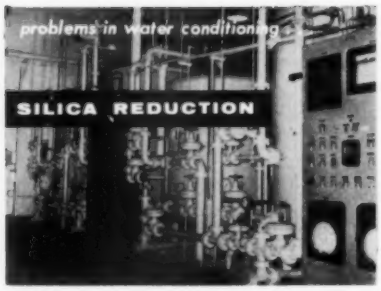
Union Oil Co. of California has scheduled brisk development for the



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Oil Creek field opened last October in San Mateo County, 40 mi. south of San Francisco.

With a northerly offset to the discovery already spudded in—and rained out—Union has staked locations for seven confirmation wells, all within a half-mile radius of the initial producer. All are on the Costa lease, held jointly with Richfield Oil Corp.

Since completion, the discovery well has averaged 80 b/d on pump. Gravity is 41 degrees, and production is from 2,094-190 ft.

The first followup, a northerly offset, received 41 in. of rain in five days during the December storms, and is still shut down pending repair of the access road.

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The Offshore Co. is setting up a rig on the first of its two new drilling barges being built by The American Bridge Division of U. S. Steel Corp. under a contract with DeLong Corp., New York.

One unit will be ready to go on location shortly after Mar. 1; the other is to be launched about a month later.

•

The Alberta government received $42,948 in cash bonuses at its first land sale of the year. Top bid of $20,101 was entered by Husky Oil & Refining for itself and an associate, Bailey-Selburn Oil & Gas, Ltd. The team received rights to 38,530 acres in the Mundare district.

•

Drilling Highlights

North Dakota—Calvert Drilling Co. has apparently opened first production in Ward County. Calvert recovered 615 ft. of oil, 410 ft. of slightly mud-cut oil, and 10 ft. of water on four-hour test of Mission Canyon formation at 5,788-820 ft. The well is 7½ mi. east of Kenmare, and 17 mi. south of production at Bluell field, Renville County.

The test is one of a series being drilled on farmout from Stanolind Oil & Gas Co., which has large holdings through this portion of the Williston Basin. A discovery would be the third east of the Nesson Anticline in North Dakota during the past six months, and would furnish new evidence that the state will have a bright exploratory year.

Oregon—Sinclair Oil & Gas Co.'s Lane County deep test—deepest ever drilled in the Pacific Northwest—is preparing to go deeper. Contractor for the hole, Coastal Drilling Co., of Bakersfield, Calif., is trucking in more 3½-in. pipe to take the wildcat down another 1,000 ft. Present depth of 12,100 ft. was reached with a combination string of 4-in. and 3½-in. pipe.

South Louisiana—Monterey Oil Co. and Kern County Land Co. announced gas and condensate discoveries in Ascension and Cameron parishes.

A find at Darrow Dome, Ascension, tested gas at the rate of 2.8-million cu. ft. per day plus 56 b/d of condensate through 12/64-in. choke from 10,956-82 ft.

The other discovery, which was drilled by Kerr-McGee Oil Industries, Inc., as operator, is in the Little Pecan Lake area of Cameron. On test at 12,405-20 ft., the well produced at the rate of 1.8-million cu. ft. of gas per day plus 72 b/d of distillate through 7/64-in. choke.

Wyoming—A two-year-old dry hole in Park County has been successfully completed by Sohio Oil Co. The well was abandoned by Sohio in 1954 as a fruitless test of the deep Madison formation in the South Oregon Basin.

The company moved back on location in November and plugged back from the old total depth of 9,150-824 ft. to test old gas shows in the Muddy sand.

The well flowed at the rate of 5-million cu. ft. per day through 12/64-in. choke from 5,768-90 ft. Location is 3 mi. southeast of the South Oregon Basin field.

South Louisiana—A Union Oil Co. wildcat in Iberia Parish was completed flowing 41-gravity oil at the rate of 259 b/d from 9,637-44 ft. Union has a block of 1,900 acres in what will be known as the Big Bayou Pigeon field.

Montana—Carter Oil Co. recovered 3,600 ft. of 29-gravity oil on four-hour drillstem test at 6,198-209 ft. in a wildcat 2 mi. south of a recent Amsden discovery at Wolf Springs, Yellowstone County.

The Wolf Springs discovery was rated one of the state's most important when completed in mid-1955. It was drilled by Atlantic Refining Co., which recently confirmed the discovery with a ½ mi. stepout to the north.

West Texas—Cities Service Oil Co. has completed its 24th producer in the Spraberry Trend. The Reagan County success had an initial flow of 281 bbl. of 38-gravity oil in 11 hours through ¾-in. choke from 6,372-502 ft.

Through Mountainous Terrain, Dust Storms and Weather Extremes...

From a point on Colorado's Cheyenne Mountain, the microwave beam is relayed over mountains and prairies alike in its 230-mile swing to gas fields in Kansas and Oklahoma.

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has justified Colorado Interstate Gas Co.'s choice for pipeline communications system

When Colorado Interstate engineers studied communication facilities to connect home office with pipeline compressor stations and with gas-producing fields in Kansas and Oklahoma, they considered wire line, common carrier and microwave. They chose RCA Microwave.

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INJECTION VESSEL is charged with radioisotopes to start a new catalyst test run. Because extremely sensitive measuring device is used, only small amount of tracer material is needed, which cuts isotope costs. In these Shell experiments . . .

Isotopes 'See' Inside Cat Crackers

One of the most detailed studies yet made of the physical behavior of fluid catalysts during commercial processing operations will be presented by Shell at the American Chemical Society's April meeting in Dallas.

It will be based on four years of research by Shell Development Co. and Shell Oil Co. at three U. S. refineries—Houston (pictures), Norco, La., and Wilmington, Calif.—and two Canadian plants. The catalyst studies included deactivation rate, mixing, concentration of solids, flow rate, and stack loss.

The research was made possible by the use of radioactive tracers. Shell used scandium-46, cerium-144, and chromium-51.

Shell adapted the radioactive-tracer technique for its studies by (1) developing extremely sensitive scintillation-type radiation-measuring devices, and (2) developing a flotation process which separates catalyst particles according to density and pore volume.

Because such sensitive measuring devices are used, only very small doses of radioisotopes are necessary. This

ACTUAL INJECTION into the regenerator is a timed injection of a few pounds of catalyst "tagged" with radioisotopes.

SAMPLES of tagged catalyst from the unit are taken for lab analysis, which uses Shell's flotation process for separating samples.

STACK LOSS of catalyst is a basic part of Shell's study. This is a big factor in the economic operation of a fluid unit.

HIGHLY SENSITIVE DETECTOR studies deactivation rates of samples that have been taken at regular intervals for analysis.

greatly reduced Shell's radioactive material costs and lessened possible health hazards. Shell's flotation process aids study of deactivation rates.

The method used in the research was to add radioactive-tagged catalyst in the reactor vessel. Samples are taken at regular intervals; and flotation separates the samples according to physical properties which can be correlated with catalyst activity. Measuring the remaining radioactivity of the catalyst determines how long the tagged catalyst has been in circulation.

While Shell is keeping quiet for the moment on the full details of its study, The Texas Co. has conducted a similar study, using cobalt-60 as the radioactive tracer. Texaco reports these findings: (1) The reason that catalyst activity decreases under conditions of prolonged stack loss is because freshly added catalyst is lost first; (2) the immediate stack loss of fresh catalyst, however, is not large; (3) tagged catalyst mixes completely with all available catalyst in the unit in about one to two hours; but (4) not all catalyst is available for immediate mixing.

OIL RESEARCH

Meetings in Field

Briefing Sessions

Closer Contacts Link All Op

Oil operating men are becoming an integral part of the research effort. They no longer say of research men, "If we don't disturb them, they may invent something we can use." More and more, they are helping research reach these goals: Find out what is needed. Create the technology. Get it used.

This week, operating men in Jersey Standard affiliates came from many parts of the country to Linden, N. J., to hear about progress in lubrication research. They attended a day-long meeting of the top coordination committee of Esso Research & Engineering Co. They were naturally outnumbered by research people. But their presence was a symbol of the growing importance oil companies are placing on closer understanding between the laboratory and operations.

This emphasis on coordination extends far down the line. Shell, for example, has a new policy of stressing more field trips by the research staff. It is calling more key operating managers into the lab for briefing sessions.

The realization is growing that almost every oil man has a stake in better research. Laboratories are working on projects that will improve operations in all segments of the industry. Among the hundreds of projects under study this week are electrical well logging, surface measurement of rock types, well fracturing, catalytic processes at the refinery, better fuels and lubricants, and sales forecasting.

Independent oil companies that can't afford their own research programs are also involved. Some are having work done by independent laboratories. And all of them benefit from the publication of new techniques by the big companies, as well as from the low-cost licensing of new technology.

A lot of money is at stake, too. The oil industry this year will invest well over the $150-million allotted to research in 1955. The budget for Esso Research may top last year's $30-million. Indiana Standard and its subsidiaries are spending $22-million on research. Atlantic is investing $5.5-million in 1956.

Comments Dr. N. B. Smith, vice-president of Shell Development Co., "The maximum benefits from research dollars depend largely on good communication between research and members of the operating team. Research results not applied, or research on the wrong problems, represent an economic waste of the country's critical technical manpower."

California Standard expresses the general view, "If a company's growth is to continue over the years, it must have the capacity to develop new ideas —and have them accepted."

The communications problem is greatest in exploration and production, because of the geographic scattering of personnel. Shell's Dr. Smith says, "In refining, operating men are more concentrated. There is a better chance for discussion."

Atlantic's production research lab in Dallas reports most trouble "in the fields most recently entered, rather than those in which we've been kicking around for a while." And on rare occasions the companies run across what is left of an old antagonism. Explains a research manager, "Many of the old-timers, with good mechanical ability, but without formal schooling, looked on all research people as meddlers. But over the years this resentment has disappeared and most of them now look to us for help."

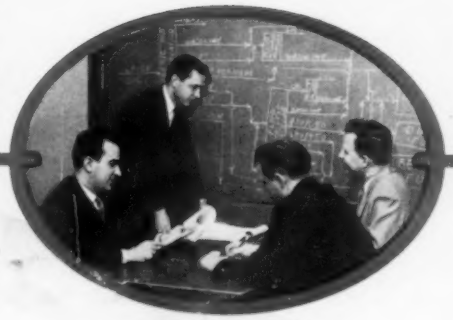
O Oil companies have built communications into their organization tables—with a lacework of committees and interlocking positions. At the top it works like this: Atlantic's Research & Development Dept. is headed by a general manager who is also a company vice-president and director. Atlantic also has a production research advisory committee, made up of operating managers. The chairman is manager of the company's crude oil production department. And he also is a vice-president and director.

All down the line, the companies have standing committees that bring operations and research men around the same table.

E. D. Reeves, executive vice-president of Esso Research, says the committees are important in getting everyone to understand the rules of the game. "For example," he says, "one of the main rules is that we want the operating people to make the decisions affecting operations. The research men may get across the facts and the background. And it's all right if the operating man asks if it's OK to change the temperature. But we don't want the responsibility put on research. The committees help put this idea across."

The built-in organizational ties are strengthened in the case of Esso Research by the fact that 87.5% of the company's operating expenses are paid by other Jersey Standard affiliates. Says Reeves, "The money is coming out of the affiliates' pockets. So they have a real interest in what research does."

O Operations men are playing a key role in planning research projects. They are represented at all planning sessions. California Standard's system is typical. The company calls in operations men from each of the four fields in which it does research—oil products, oil processing, petrochemicals, and oil field operations. These men report what they think needs



Informal Talks

Joint Planning

OIL OPERATIONS

Operating Men to Research

researching. Each idea is accompanied by across-the-board data on potential use, production costs, plant construction cost, and market value. Then the operations and research men together grind out a decision on whether to go ahead.

All the companies agree that the flow of ideas from operations can't be on a once-a-year basis. Says Indiana Standard's manager of research, J. K. Roberts, "Regular information from all levels may show that an entirely new line is of interest. And a big research effort may be diverted to it."

O The planning session is only one of many meetings companies are holding that serve to unite operations with research. Some are held far from the board room. Explains the manager of a Midwest production lab, "Our meetings are held in the field, by field people. The research man and the top man in the area are present. The employees with ideas, or problems of any kind he thinks the research lab might solve, gets a chance to air them. This is a down-to-earth session, with the brass doing the listening."

At the other end of the scale are Indiana Standard's week-long technical sessions, attended by more than 300 top men. The largest single group is research men. But manufacturing, engineering, and sales are heavily represented. About 90 technical papers are given; most emphasize research. But any department may contribute.

Esso Research holds similar mass technical sessions. And vice-president Reeves says, "We don't try to keep the operations men quiet. Any guy may pop up at any time.

O The transfer of research men to operations, and vice versa, helps build understanding. This is a common practice. At a production research center, the director and three assistants "have risen through long service in different phases of operations," according to a staff official. He adds, "They are able to tackle any operating problem, and know what research should do about it."

Indiana Standard's Roberts observes, "In our company there is little tendency for operating people to look upon researchers as 'long hairs.' That's because seven of the fifteen board members were once in the research department."

O Among the most effective links are the technical service teams provided by research departments. They are constantly in the field trouble-shooting operational problems and carrying field data back to the labs.

The engineering work Esso Research does for Jersey affiliates, Reeves stresses, is "the main method for translating research into operations."

California Standard says, "Our technical service men get to know the operating men personally. They are constantly watching for problems with research potential. And the operations men are not reticent in making their problems known."

In sales, Indiana Standard has a technical service group that works within the sales department itself. But members meet regularly with the company's research staff.

O Field trips by all lab personnel, and by high research officials, are proving one of the best ways to bridge the gap. Says Reeves, "If our research people don't have the operations data they need, they'd better go out and get it."

Members of Esso Research's top-level Research & Development Coordination Committee make trips to company affiliates as a unit—and also individually. Reeves himself will be off to Venezuela within a few weeks, and will follow that with a swing to offices of Jersey affiliates in Europe.

An executive with a Jersey affiliate comments, "These junkets are very important. They give the top technical people a chance to mix with the field force. Without formality, the operations people can explain their troubles. You can do a lot of good swapping ideas that way."

O Several of the companies feel strongly that there should be fewer "confidential" labels on research data. One of these is Indiana Standard. Says research chief Roberts: "We believe the benefits from free intra-company communication more than offset any damage likely to result from leaks. Our men do not have to ask questions through formal routes and 'organization procedure.'

Roberts also strongly endorses his company's location of the refining, engineering, and research buildings on the same grounds at Whiting, Ind. "I believe a laboratory should be close to the plant," he says. "This is partly for the effect of plant contacts on laboratory men, and partly for the reverse. It's a great mistake to isolate the two groups." All personnel at Whiting use the same cafeteria.

O The printed word is being freely used to reach operations men. Shell Development Co. is typical in its liberal mailing of technical papers, minutes of research meetings, monthly and quarterly progress reports, and project reports. Vice-president Smith says, "We go to considerable expense. This is not only in preparation of the material—with charts, graphs, and illustrations—but also in the number of copies distributed."

All of the labs make regular reports

on research work to operations men. These usually tell what the lab is studying, the progress it is making, and its plans for new work.

Management-development and supervisor-training programs are also helping to link operations with research. A primary goal in such companywide efforts is to break down departmental barriers and get men to work together. The training courses often include visits to labs by operating people.

Improved coordination is removing a roadblock in the path of better research—the failure of operating men to report field problems that research could help solve. Says a production research official, "We realize there is a certain amount of human behavior in such practices. Naturally an engineer wants to get ahead. If he can show his superior that all is well in his bailiwick, he gets a pat on the back and maybe a raise and an advancement.

"But in this company, any cover-up by field personnel would be tantamount to resignation. And with our technical men out in the field, it wouldn't take too long to spot this.

"But we haven't had to face up to this problem. Operations men are willing to tell research men about their difficulties if the two groups are working together. This is especially true if operating men are aware of the work research is doing, and the research men know enough about operations to ask intelligent questions. That's the atmosphere we've tried to develop."

Most of the companies think their communications techniques are working well. But they are not complacent. One research director says flatly, "We have no improvements to make." But another admits, "To be quite honest about it, we are not yet entirely satisfied." A third echoes the majority view by saying, "We are generally pleased, but not satisfied. Eternal vigilance is required. You can't just set up a program and then forget about it."

RESTAURANT in London is one of four that Shell Petroleum is using to make . . .

Free Lunch a Boon to Employees

Shell Petroleum Co., Ltd., is improving the health and morale of its London employees by serving them 5,000 free lunches a day.

The company is doing this mainly because of "notoriously inadequate" restaurants in the congested area containing the 25 buildings where the employees work. Other reasons are the increasing number of employees, and the rise in taxes and living costs since the war. Cafeteria-style lunches are served at four restaurants.

This week, Shell summed up the benefits this way: (1) Employee health standards have been raised; (2) absenteeism due to illness has dropped 30%; and (3) employee relations have been improved, with the lunches "a particular attraction in recruiting new employees."

The plan was started in 1947, when rationing was severe in England. Many employees, especially women, were eating poor lunches as an economy measure.

And Shell isn't forgetting the coffee break. The restaurants serve 6,000 cups each morning. And in the afternoon—6,000 cups of tea.

What's New
IN MANAGEMENT

Price Facts to Public

Texaco management this week is pushing a public education program in Michigan. The campaign explains "high" gasoline prices, which have brought a threat of utility controls in the state.

Through its 1,000-plus dealers, and its wholesalers, in Michigan, the company is distributing 100,000 pamphlets. These point out that gasoline prices in Michigan are higher than in some other states mainly because of higher taxes and higher station margins (which dealers claim are necessary). The pamphlets carry the message that the ex-tax price of gasoline today is about what it was 30 years ago; gasoline quality is much higher.

Texaco is sending the pamphlets to all its credit-card holders, employees, dealers, distributors in Michigan, the state's legislators, and newspapers.

Last week and this, the company had its zone managers and station salesmen make slide presentations on prices to its Michigan dealers and employees. And this week Texaco dealers throughout the state are handing out the pamphlets to motorists.

Texaco's campaign supplements similar programs by other majors in Michigan, such as Indiana Standard and Shell. The goal, according to Texaco management, is this: "We want everyone to know the facts about prices. If the public and legislators are informed, they won't go for utility controls."

•

Eighteen top sales personnel of Kendall Refining Co., Bradford, Pa., this week are going to class to learn "effective speaking." Earlier, 20 of the company's top executives completed the course. Says Kendall, "We believe we have accomplished that most important job of teaching our people to think on their feet." The next step: a program for faster and better reading.

•

How to simplify nonrepetitive work is the main target of a supervisor-training course started this week by Esso Research & Engineering Co. The 10-week course stresses the human-relations aspect of work simplification. The company observes that, "when ideas are a company's main product, the job of simplifying operations is doubly hard." Ninety supervisors will attend class two hours a week.

DU PONT

PETROLEUM CHEMICALS DIVISION NEWS

DU PONT

January ★ One of a Series of Interest to the Petroleum Industry ★ 1956

QUESTION BOX

1. WHAT is the *"typical"* American service station operator's reaction to price wars?
   (see article at right)
2. WHERE can you look for new program ideas for your next dealer meeting?
   (see below)
3. WHOM can you contact for technical service in the Gulf Coast Region?
   (see next page)
4. HOW can you prevent *gel-clogged* heating oil lines?
   (see next page)

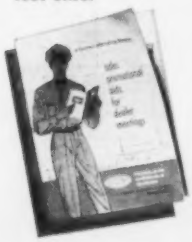
ANOTHER DU PONT MARKETING SERVICE

Wide selection of program aids available for dealer meetings

During recent years, a wide variety of sales promotion aids have been developed by the Du Pont Petroleum Chemicals Division. These are all designed to be readily adaptable by any oil company for use in its own marketing program. And they make ideal program material for dealer meetings.

A new movie, "When the customer says 'KNOCK,'" is one example of the material available. This explains the common causes of knock other than gasoline quality and helps your dealers answer customer complaints in a salesmanlike way. You can follow up this film with a series of cartoon booklets that will help the dealers remember its message.

Another unique film presentation showing dealers how they can easily *sell themselves* is narrated by an animated cash register. And there are flannelboard presentations on gasoline and lubricating oil quality. Chassis dynamometer and single-cylinder engine demonstrations are also included. For special programs, you can even arrange to use the Du Pont fleet of fuel test cars.



For more information on these and other dealer meeting aids, just get in touch with any of our sales offices. Ask for a copy of "Sales Promotional Aids for Dealer Meetings."

WHO is your "typical" dealer . . . and HOW does he operate?

Many important facts about the man and his business are revealed in Report No. 4 of Du Pont's continuing market survey, "The Service Station Operator"

Thousands of customers form, confirm, or change their opinions of your company every day . . . based on the impressions made by your service station operators. Because of this, a composite, cross-section picture of the average dealer can be valuable to you in formulating dealer policies and sales promotion plans.

"The Service Station Operator" is a new Du Pont survey designed to give you a clear, concise picture of the average American dealer . . . his employees, his business, his opinions, his background, his relation to his petroleum products supplier, and his motivations. Three reports on this survey have already been published and made available to marketers by the Du Pont Petroleum Chemicals Division.

They cover (1) such dealer retail functions as station hours, gallonage, credit and mailing lists; (2) dealer knowledge of products, additives, sales assets, and prices; and (3) opinions on dealer meetings, advertising, dealer publications, and sales aids.

Report No. 4

The fourth report in the series, which has just recently come off the press, discusses the dealer's relationship with employees, his income and reactions to price wars, and his interests in dealer association activities.

The statistics included in the report are graphically illustrated with charts and are enlivened by cartoon drawings. This format makes the important points easy to reach, remember, and refer to.

What happens when . . .

For example, how does the average dealer react to a price war in his own marketing area? That is one of the factors influencing your business which is covered in Report No. 4.

Most of the dealers who have experienced price wars, the survey found, encountered them within the past year. What did they do? . . . The biggest percentage of them met the competition by cutting their own prices. A number of them, however, decided to hold out and refused to cut their prices. Other interesting reactions are also tabulated in this survey report.

OVER

ADVERTISEMENT—Prepared for the Petroleum Chemicals Division of E. I. du Pont de Nemours & Company (Inc.)

DU PONT

PETROLEUM CHEMICALS DIVISION
NEWS

DU PONT

CONTINUED "Dealer Survey"

What's next?

A fifth report on "The Service Station Operator" survey is due to be published soon. This will be the most significant of the whole series of reports. It will discuss the interrelationships of all the factors covered in previous reports . . . such as how dealer meetings, station hours, price wars, and other variables affect sales volume.

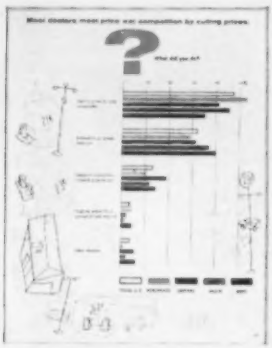
As part of the continuing market research work of the Du Pont Petroleum Chemicals Division, this dealer survey is the natural follow-up of an earlier survey on the buying habits of consumers at service stations. The interviews were conducted on a completely impartial basis by National Analysts, Inc.

Specialized cross-tabulations

Based on personal interviews with 2,633 service station operators – selected by the scientifically accurate area-sampling method – the survey is representative of all the operators in the United States. But the results can be broken down and cross-tabulated to give a true sample of any of four geographical areas.

And in addition to the regular distribution of reports to marketing executives, the entire survey has been tabulated on IBM cards, which will give a wide variety of specialized breakdowns to meet the individual needs of various oil companies.

For more information about this survey, just get in touch with any of our sales offices listed below.



HERE IS a typical page from Report No. 4 on "The Service Station Operator."

GULF COAST REGIONAL LAB MANAGER

John N. C. Cameron, manager of the Du Pont Petroleum Chemicals Division's regional laboratory in Houston, Texas, is in charge of customer service, product testing and additives treating recommendations for Du Pont customers in the Gulf Coast Region.

Before joining the Du Pont Company in 1949, Mr. Cameron was with the Research and Development Division of Humble Oil and Refining Company at Baytown, Texas. During his seven years with this company he worked as a research chemist on octane rating and light oil analytical research. He also did pilot scale research on catalytic treating. Prior to his assignment at Humble, he was employed for three years by the Gravity Meter Exploration Company in Houston.

After starting his college career at the University of Texas, he transferred to the University of Houston, where he received his B.S. degree in chemistry.

Mr. Cameron is a member of the American Chemical Society.

Gel-Clogged Heating Fuel Line!

. . . you can avoid this complaint

A rash of clogged fuel line complaints can quickly jockey you into some rather embarrassing situations. On the other hand, you can easily avoid this kind of trouble before it starts.

If the fuel oil is at fault, the clogging generally occurs in the line leading from the fuel oil storage tank to the burner, or at the screen ahead of the fuel pump. This clogging is generally due to the formation of a *gelatinous* material. And copper or brass are the culprits.

Since the feed-in line and the screen are often made of copper alloys, these are a potential source of copper mercaptides. If formed in sufficient quantities, the mercaptides become gelatinous in nature. So to prevent the clogging you must protect your fuel against the harmful effects of copper.

Here's how . . .

You can help assure adequate protection with DMD (Du Pont Metal Deactivator). It is highly effective in most fuel oil stocks in low concentrations (about 2 pounds per 1000 barrels).

This means that you can, in most cases, insure yourself against the harmful effects of copper–and promote better customer relations, too–at a cost of *less than ½ cent per barrel.*

For best results, it is recommended that you use DMD in combination with Du Pont Fuel Oil Additive No. 2 which guards against sludge.

THIS BOOKLET describes the properties, uses, and methods of addition of DMD. If you do not have a copy, any of our sales offices listed below will be glad to send you one.

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Printed in U. S. A.

The Retail Customer in 1956: II

Travel business is oil business. And it's booming. Last year, footloose Americans spent $11.2-billion on rail, air, and bus tickets—and on driving their own cars. About 70% of this spending—nearly $8-billion—was for auto travel, mostly oil and gas for the family car. (This is strictly family travel. You have to add spending by salesmen and other business travelers to get total gasoline sales.)

This year the nation's nomadic habits will cost it even more, probably about $12.0-billion. In short, oil and gas have an $8.4-billion stake in the 1956 travel boom.

* * * *

The Commerce Dept. has applied its statistical spyglass to family finances, and it reveals that 3¢ of every consumer dollar, on the average, eventually flows through the fuel tank. Gasoline is one of the fastest growing sellers in the consumer market. Sales have averaged a 10% annual growth since the war.

A big reason for this, of course, is that there are a lot more cars on the road. But that's not the whole story. People are driving more. Suburban living requires more traveling to and from work, and to and from recreation. And vacations have been a big factor. Nobody knows exactly how much money people pour into vacations annually, or how far they drive. But probably 20-million American families will get away some time this year for more than a weekend. Vacation auto travel this year will probably add up to somewhere between 20-billion and 25-billion mi.

The American Automobile Assn. estimates that 80%-85% of vacation travel is automobile travel. At the remote but popular national parks, automobile travel is even more predominant. Studies have indicated that over 90% of park visitors arrive by car.

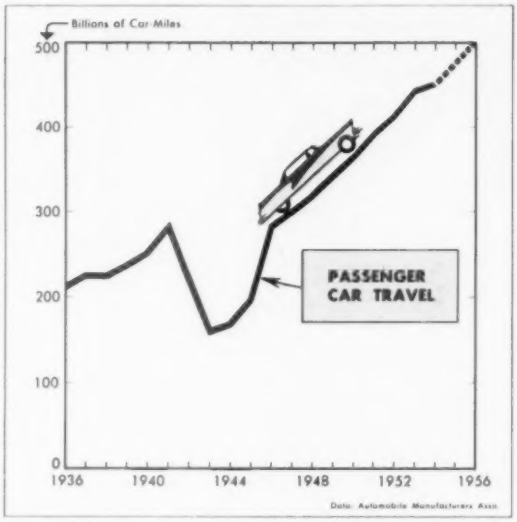
Probably the best indicator of how many miles people drive on vacation is AAA's experience in routing its members. On the average, an AAA traveler covers 1,100 mi. per trip.

* * * *

Travel is a winter business these days as well as summer. AAA notes that, while some of its members are taking shorter vacations, they are taking two a year. Winter is creeping up behind summer as a favored relaxing season.

Other new trends are showing up, too. For instance, on some cross-country junkets, a fly-and-rent-a-car-there combination apparently appeals to many people—including the guy at the gas pump "there."

Time and money are the two contingencies that most affect travel plans. Travel—both weekend and vacation—has undoubtedly got a big boost from the wider adoption of paid holidays and vacations for hourly as well as salaried employees. Not only have vactions become more widespread, but the terms have become more liberal. More and more long-term employees are getting three weeks or more a year.



The American public is a traveling public. World War II nipped its touring habits, but, aside from that, highways have had to accommodate more traffic each year. An all-time high of 500-billion vehicle miles looks likely for 1956. And that's good news for the oil industry.

But the big plus factor for 1956 is income. Gasoline is a volatile substance, not only in the car, but in the consumer budget. That Commerce Dept. statistical spyglass has shown that when consumer incomes change, purchases of gasoline change 1½ times as fast. And in 1956, income per capita may be up as much as $50.

Other factors also point to a big gain in travel for 1956. Recent surveys show that most consumers are in a free-spending mood. And if they spend less on cars and household appliances in 1956, as is expected, there'll be more money available for travel and recreation. Passenger cars may roll up as many as 500-billion vehicle miles in 1956 (chart), a 5% increase over 1955's estimated 475-billion car miles.

About the only thing that could hold back this expansion is congestion on the highways. It's the only flaw in the oil industry's picture of a really eager consumer market.

LORD STRATHALMOND (right), shown here escorting Queen Elizabeth on a tour of BP's Kent refinery, is retiring, and . . .

Famed BP Ruler Gives Up Reins of W

A long-famed figure of the international oil scene is relinquishing the rule of the company he helped build from small beginnings in southern Iran into an oil empire on a global scale. William Fraser —now Lord Strathalmond—last week revealed he's giving up the reins of British Petroleum Co. next Mar. 31 at the age of 68.

Neither Lord Strathalmond's new title, however, nor the equally new name of his company (changed in 1954), reflect the long and dramatic chapter in international oil history associated with him.

As Sir William Fraser (until he was named a baron last year), he was known throughout the oil world as the dignified, but unapproachable, one-man ruler of Anglo-Iranian Oil Co.—pioneer of Middle Eastern oil. Of his 37 years with Anglo-Iranian, he's been a managing director for 33 years, and chairman or deputy-chairman for 28 years. For the past 15 years, he's held the No. 1 post in the company.

In 1951, when Iran's oil nationalization crisis exploded, Sir William and his company were catapulted into wider fame—and became almost as much of a household term as Iran's more colorful, though shorter-lasting, Dr. Mossadegh.

BP's new head will be a quite different personality: 63-year-old Basil R. Jackson. He's as noted for his urbane charm as the outgoing chairman is for his Scottish aloofness. And he's widely known in oil circles, especially in the United States.

Jackson has spent 15 years in oil service in this country. He opened Anglo-Iranian's office in New York in 1930, and served as the company's representative here until 1935. After the outbreak of World War II, he returned to the United States, and subsequently was named by the U. S. Petroleum Administrator for War as one of the two British representatives on the Foreign Operations Committee.

After the war, Jackson continued as his company's New York representative until May, 1949, when he returned to London to become a managing director. A year later, he advanced to the No. 2 spot, deputy chairman.

The new chairmanship is in no sense expected to mark a "new era" for BP. Actually, the company already entered a new era recently: of worldwide diversification. Jackson is generally expected to develop and strengthen this pattern.

Two additional executive appointments announced last week also involve men long associated with Lord Strathalmond. Neville A. Gass will become deputy-chairman on Apr. 1, succeeding Jackson, while Maurice Bridgeman will be named to fill the vacancy on the board caused by the chairman's retirement.

BASIL R. JACKSON, 63, well known in U.S. oil circles, will be the new BP chairman.

# of World Giant He Shaped

A lean-faced Scot, who still retains a Glasgow accent, William Fraser got his start in the Scottish shale-oil industry. But it was in Middle East oil that he made his mark.

After World War I, when the shale-oil business fell upon meager days, young William Fraser merged the four surviving Scottish firms with his own family concern into a single company, and in 1919 brought it all under Anglo-Persian Oil Co. (as Anglo-Iranian was once known).

Anglo-Persian was still a struggling youngster then. Only 10 years old, it had been organized to take over a 60-year oil concession in southern Iran. The Middle East's first commercial oil production had been struck there in 1908. The company soon grew and prospered. Oil demand began to grow by leaps and bounds after World War I. And rich oil reserves were uncovered in Iran—beyond the company's wildest dreams.

By 1950, Anglo-Iranian had blossomed into a giant oil corporation, by any standards. But all its eggs were still in one basket: the Middle East and, more particularly, Iran.

The British government has owned 56% of the company's stock ever since the first World War, when Sir Winston Churchill, then First Lord of the Admiralty, urged its acquisition to protect the Royal Navy's fuel supply.

The company's Iranian production had been pushed to a whopping 600,000 b/d, by far the largest in the Middle East and the fourth-largest in the world (exceeded only by the U. S., Russia, and Venezuela). On barren Abadan Island, the company's refinery had mushroomed into the largest in the world, processing 500,000 b/d.

Anglo-Iranian had not overlooked other possibilities, however. It had been one of the initial group of international companies that formed the Iraq Petroleum Co. after World War I to develop oil rights in Iraq. Its share was 23.75%. In Kuwait, too, it had acquired in the 1930s a half interest in an oil concession (jointly with Gulf Oil Corp.).

But even as recently as 1950, these interests were small compared to Iran.

Then came Iran's sudden cancellation of Anglo-Iranian's concession in 1951. The dispute and three-year shutdown of the Iranian installations is a story too well known to need detailing. But the important point is this:

Just when everyone was preparing to attend its wake in 1951, Anglo-Iranian displayed an unexpected, hidden asset: a remarkable vitality in reasserting its existence on a bigger scale than ever before.

Anglo-Iranian threw itself into the herculean task of developing alternative sources of supply—this time spreading its eggs into as many far-flung baskets as possible. Within a couple of years, it had succeeded in replacing its entire Iranian oil production from stepped up output in Kuwait, Iraq, and Qatar. And it had also spread its oil search to such new areas as Canada, Australia, Sicily, and elsewhere.

The same urge to strike out and expand into new areas has emerged in the company's refining operations. Plans for new refineries, still in the blueprint stage in 1950, were rushed to completion, and new ones added.

The new refining pattern is now a reality for all the world to see. The risk is nicely spread. New refineries have been built in Australia and Aden. On the Continent, new plants have been built at Antwerp and Dunkirk; old ones near Venice and Marseilles have been enlarged. In the British Isles, the company's refining capacity has been tripled.

There's a new marketing push, too, behind the company's green-and-yellow BP emblem. The whole distribution network has been streamlined and expanded, and brand-new marketing areas opened. In the words of a competitor, "BP is in fact busting out all over."

By 1954, when the company recovered part of its former Iranian supplies through a 40% share in the international oil consortium, it bore little resemblance to the company that had left Iran just three years earlier. To seal that fact, it changed its name from Anglo-Iranian to British Petroleum.

In fact, Lord Strathalmond's greatest claim to historical fame may be his remarkable achievement in his last few years of office: his extraordinary resiliency and leadership in transforming this company from Anglo-Iranian, a one-sided Middle East oil firm, into British Petroleum, a fully integrated, international giant.

LAKE MARACAIBO is the center of one of Venezuela's two main oil producing regions. Now, for the first time in 10 years, oil rights for new areas are promised, and . . .

Venezuela Bidding Will Be Hot

Some 25 oil companies—mostly American—were busy this week preparing new bids for Venezuelan oil rights, following last week's announcement in Caracas that concessions will be granted "as quickly as possible." The decade-long freeze on new concessions was apparently ended by President Marcos Perez Jimenez' Jan. 11 announcement that the doors were open at last.

Venezuela has asked for bids on new concessions several times within those ten years. But in each case, it took no action on the bids after they had been submitted. This time, according to Caracas reports, grants will probably be made within six months.

New bids are to be submitted by Feb. 10. Those bids submitted in the past must be revalidated, and may be modified, by Jan. 31. And the Ministry of Mines & Hydrocarbons reiterates that payments for concessions must be made only to the Venezuelan treasury. "The government does not have or need intermediaries or commission agents, within or outside the republic," it said.

Some 22 to 25 groups, including the 14 companies now operating in Venezuela, have submitted bids for concessions at various times in the past. This time the list may go as high as 30, one oil man estimates. The previous applicants are understood to include such prospective newcomers to the scene as Sun, Superior, Conorada, Union Oil, Cities Service, and a Belgian-French company.

The new concessions won't necessarily go to the highest bidders. In fact, the government has announced that bids will be judged on the basis of their "special advantages to the nation"—such as: higher exploration taxes; higher royalties; more refining; spreading exploration to new areas of Barinas and Monogas; diversifying the types of crude produced; cooperation with the government on agricultural, communications, and industrial projects, and isotope research.

The current concession acreage totals 15.3million acres, or about 7% of Venezeula's total area.

Considerable speculation has arisen among U. S. oil men on the relative chances of bids from newcomers and established companies. The generalized phrasing of the government announcement gives little clue to weighting of preference on one side or the other. Both the haves and the have-nots feel they may have a slight edge for gaining the highly prized oil rights. One side feels its proven investment pattern will carry weight. On the other, one potential newcomer believes Venezuela wants to draw new U.S. companies into its industry. Purpose would be to expand its audience in the U.S. for Venezuelan oil imports and to increase its chances of new marketing outlets. Officially, however, the recent invitation opens the field to all comers, both old and new.

Previous bids by new entrants have generally offered higher royalties and bonuses than required by law.

What's New

Creole Sets Record Outlay for 1956

VENEZUELA — Creole Petroleum Corp. will invest a record $187.5-million in oil development this year —exclusive of expenditures to be made if it gets new oil concessions. The Jersey Standard subsidiary is Venezuela's largest producer, with output running over 1-million b/d, approximately one-half the country's total output. Announcing the investment program, president Harold Haight predicted an 8% rise in Venezuela's production this year to an average of more than 2.3-million b/d.

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New Refinery in Cuba?

CUBA—Two Florida businessmen have organized a new company to build a refinery at Cienfuegos. Daniel S. Dubbin, of Jacksonville, and Henry Dubbin, of Miami, have set up the National Petroleum Corp. of Cuba in conjunction with Cuban interests, to build a $10-million plant at the Caribbean port. The brothers say stock in the new firm, which has been approved by the government, will be sold publicly in Cuba to finance the plant. The refinery will process 5,000 b/d of Cuban crude, or about half the requirements of the industrial district around Cienfuegos, the principal loading port for Cuba's sugar industry. The new firm has options on 50,000 acres of Cuban oil concessions, Daniel Dubbin says.

The Dubbin brothers have their main offices in Jacksonville. Daniel Dubbin is president of American Coastal Lines Co., a shipping firm, and the St. Johns Terminal Co. The Cuban associates in the newly formed company are Havana businessmen Juan Restoy Sanchez and Dr. Nicomedes Viego Llorente.

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Shift Non-Oil Functions

IRAN—The government's scheduled gradual takeover of the "non-basic" operations of the international oil consortium got under way on Jan. 1, when National Iranian Oil Co. assumed responsibility for medical and health services in southern Iran's oil areas.

Under the 1954 oil agreement, all

functions of the consortium's two operating companies not directly concerned with the production and refining of oil are to be taken over eventually by NIOC. The transfer of the health services was the first move to implement this section of the agreement.

Included in the shift are 9 hospitals, with a total of 1,000 beds, and 39 clinics. These facilities make an annual 1½-million examinations for all employees and their families. Nonemployees are also treated in places where no other medical services are available.

The budget for medical and health services, the operating companies say, runs into the equivalent of $5.3-million annually. Of this total, approximately $2-million is recovered from workers' social insurance. The balance comes from the budget for nonbasic operations as prepared by NIOC and the two operating companies under the 1954 agreement.

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Gulf Sets Sicily Outlay

SICILY—Gulf Italia will invest nearly $11-million in its oil-development program in Sicily this year. With a cold eye on the highly unfavorable oil law being studied by mainland Italy's Parliament, the company announced in Rome that it would spend in Sicily 90% of its total 1956 Italian investments and expenses of about £4,312,000 ($12,073,600).

Earlier this month, the Gulf subsidiary said, it produced its millionth barrel of crude at Ragusa since the start of operations in late 1953. By the end of this year Gulf hopes to step up production there to 13,000 b/d. At present, eight producing wells (out of ten drilled) have a total output of about 6,400 b/d. In addition to drilling more wells this year, the company will build a pipeline from the field to the Rasiom refinery at Augusta to permit an increase in output of the present producers (PW—Dec.23'55,p27).

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Sinai Field Extended

EGYPT—International Egyptian Oil Co. last week confirmed extension of its Belayim field with an oil find 3½ mi. south of present production on the Sinai peninsula. Southern California Petroleum Corp., operator for the internationally owned company, reports that Belayim 113-1 cored 100 ft. of oil sand in the interval 8,130-265 ft. A drillstem test of 40 ft. of the zone yielded 55 bbl. per hour of clean 22-gravity oil.

The well was undertaken as a test of previously proven sands. The discovery well, Belayim No. 2, is producing from 8,580-660 ft. The other five completed wells at the field are producing from shallower zones. The company is now proceeding with its plans to carry development of Belayim into the Suez Gulf, where three-quarters of the field is believed to be situated.

Southern California recently signed its new agreement with International Egyptian, under which its role shifts next June from that of operator to straight drilling contractor. Petrofina, one of the majority owners of the company, is expected to take over direct operation of the Egyptian activities at that time (PW—Dec.16 '55,p26).

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Pemex Tests Seen Good

MEXICO—Four producing wells have now been completed at Nuevo Progreso, Petroleos Mexicanos' new oil find in Veracruz (PW—Dec.16 '55,p29). Although Pemex has not yet made a formal announcement of results of its tests, preliminary results made available to PETROLEUM WEEK indicate the four wells have producing zones totaling 265 ft. in thickness. Two other tests now being drilled may add to the pay area.

Currently wells No. 4 and 8 are drilling, with 1, 2, 3, and 13 described as producers. According to the latest report, initial production at No. 1, the discovery well, was at the rate of 1,453 b/d through 15-mm. choke from 7,176-95 ft. No. 3 was brought in on Jan. 3, with initial production at the rate of 1,038 b/d through 10-mm. choke from 7,276-329 ft. No. 13, also brought in on Jan. 3, produced 1,088 b/d through 10-mm. choke from 7,359-98 ft. No. 2, though described as a producing well, is being deepened, and no further information on it is currently available.

Pemex is now said to be convinced that Nuevo Progreso is a new field, although there was some question, when the discovery well was brought in on Sept. 10, whether it was an extension of the Poza Rica field 5 mi. to the south. There is said to be a definite nonproductive area between Nuevo Progreso and the nearest producing well at Poza Rica. The two fields, however, are producing the same 30- to 31-gravity crude. The geology—a reef development along the flank of porous limestone—also appears to be the same.

Pemex is planning to use six rigs to develop the field on a 40-acre pattern. No estimate of the Nuevo Progreso reserves is available.

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Jersey Adds Oil Rights

LIBYA—A Jersey Standard affiliate will start surface exploration soon, now that it has been granted six further oil concessions. The areas granted last week to Esso Standard (Libya), Inc., had been pending since the first concession was acquired last month (PW—Dec.27'55,p31). The new holdings bring its total to 18.8-million acres. The company now holds four concessions in the province of Tripolitania, two in Cyrenaica, and one in Feezan. Preliminary geological reconnaissance had been carried out in Libya during the past two years.

Only formalities remain to be completed now in granting of all outstanding concessions requested by U.S. and foreign groups under the new petroleum law. The roster, predominantly American, includes: Bunker Hunt, of Dallas, Texas Gulf Producing Co., Socony Mobil, Continental, Texaco, Standard of California, Amerada, Ohio Oil, Esso, Compagnie Francaise des Petroles, British Petroleum, and Royal Dutch Shell.

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SYRIA—The government will go ahead with plans to invite international tenders on construction of its refinery despite the Soviet Union's recent low-cost offer (PW—Dec.16 '55,p29). The decision was made by the Cabinet to stick to the government's earlier intention, and bids will be asked on a 15,000 b/d plant.

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U.S.S.R.—A 93% increase in oil output by 1960, to a target of 2.7-million b/d, is scheduled in the Sixth Five Year Plan, which begins this year. The oil production target for the plan that ended in 1955 called for an 85% increase in the 1950-55 period, to a goal of 1.4-million b/d. The new plan, announced in Moscow this week, calls for an overall 65% rise in industrial output by the end of 1960, and a 70% increase in heavy industry. The program also provides for atomic power stations with total capacity of 2-million to 2½-million kw.

Buoy Scouts Do Man-Sized Job

Scouting is an old and honored job in the oil industry. But there's a new twist being added in the areas of offshore drilling. It is on the Continental Shelf that the tidelands oil scout, sometimes dubbed a "buoy scout," is writing a colorful new chapter to the scouting story.

The first real tidelands oil discovery in the Gulf of Mexico came in 1947. Now there are about 50 companies and operators exploring, drilling, and producing in the coastal areas off Texas and Louisiana. And the belief is general that this is just the beginning. The tempo of activity is increasing at a faster rate each passing month. More and more oil operators are going into deeper waters, farther from shore.

In an effort to keep abreast of all the varying activity going on in this challenging area, oil companies have turned to an old reliable of the industry—the scout. But the unique problems met in the offshore area have called for new approaches, new techniques, new solutions.

Although the basic objective—gathering information on competitive activity—remains the same, the tidelands oil scout does his work far differently from the usual land scout.

Oil scouts on land usually travel about their territory by car; the tidelands scout relies heavily on airplanes. Where the scout on land gets a lot of his information by asking questions at or near the rig or other particular points of interest, the tidelands scout depends mostly on what he can see and photograph.

But both types of scouts also get much of their information by free exchange with each other, usually at weekly meetings known as "check-meets." In fact, the interchange of information is becoming an increasingly important source of information to all scouts.

While free exchange of information is the accepted practice, secrecy about activity in unleased acreage is maintained. That's where the oil companies, and their scouts, draw the line on cooperation.

Bailey Summers, of Gulf Oil Corp., became a tidelands oil scout four years ago. He doesn't know why he was picked, but he's glad he was.

There aren't any bigger "kicks" to be had out of life, according to Summers, than those you get as a tidelands oil scout. Summers, a tall, shrewd-looking Texan (he was born in Nacogdoches), was buying leases for Gulf's land department from 1945 through 1952. Then he was asked if he wanted to become a tidelands scout.

BAILEY SUMMERS, offshore oil scout for Gulf Oil Corp., spends his time flying over the Gulf of Mexico, keeping tab on what competitors are doing.

Currently, Summers is chiefly concerned over any activity in two sites off the Texas and Louisiana coast. These areas have been set off for leasing by the Interior Dept. at the next federal sale.

The two areas make up about 1,365,000 acres. One has been designated the East Addition, High Island area (off Texas) and the other has been termed the West Addition, West Cameron area (off Louisiana).

"We're all shooting for that federal sale now," says Summers, "trying to find out what the other fellow is doing." Deadline for submission of nominations for the sale is Feb. 10. If Gulf is going to do any bidding on any acreage in this area, it will be to its obvious benefit to know whether other companies are going to make bids for the same acreage. The degree of activity might be a tipoff on just how spirited the bidding may be, or whether there will be any bidding.

Ordinarily, Summers covers about 900 mi. of Texas and Louisiana coastline each month, mostly by plane. His "whale pasture" includes about 30,000 sq. mi. of Gulf Coast tidelands and offshore acreage.

His bailiwick extends from Brownsville, Tex., to New Orleans. It's not unusual for him to have dinner in Mexico one night and in New Orleans' French Quarter the next. Along his route, Summers has to keep tabs on what may be occurring in any spot in the whole 30,000 sq. mi. Each week, on the average, Summers will fly from Galveston to Brownsville, and back, at least once. And, with activity off the Louisiana coast increasing almost daily, Summers is averaging about two round trips between Galveston and New Orleans.

When he's flying over the Gulf, Summers is constantly on the lookout for anything which means some new activity in offshore work. A camera is a useful, though not mandatory, piece of equipment.

On these flying trips, Summers likes to fly in a twin-engine seaplane, a Grumman Widgeon. He also likes to fly with a particular pilot—J. C. (Bo) La Grone, Jr. Summers says, "Bo knows what I'm after and often can spot something even before I do. When I start taking pictures, he knows just how to bank the Widgeon. We've been flying together for so long we've become a team."

Picture-taking, as such, is not a necessary part of his job, but Summers finds it very helpful. Photographs often will show what the naked eye will not observe, and a tidelands scout can't afford to miss anything.

Summers' main concern, as a tidelands scout, is keeping on the lookout for new activity in unlikely spots. He does this by keeping a check on all offshore drilling barges, crewboats, and related vessels. If a new crewboat shows up in a particular area, Summers makes it his business to find out who it belongs to, and what it is up to. He does this by making notations as to location, and the like, while flying over the area, and following that up with inquiries on the ground.

Most of his other duties involve checking on the number of wells being drilled, where they are being drilled, and any other offshore movement which can be interpreted to mean new activity, be it in the geophysical, drilling, or production category.

Summers has joined with 11 other tidelands oil scouts to form the Louisiana Offshore Oil Scouts Assn. This group meets weekly in New Orleans

to swap the latest bits of useful information.

The cooperative exchange of information helps oil companies save money in several ways. For one thing, they don't have to hire extra scouts. But, more importantly, they get the information they need. If one company, for instance, runs into difficult drilling problems at a certain depth, its experience might help others facing a similar situation.

"Our primary purpose is to help everybody," Summers say. "If we can develop ways of saving money, that's what we are after. With offshore work so costly, we are just trying to work out methods to keep from getting stuck out there."

By flying over the Gulf as much as he does, Summers is in a good spot to check on other scouts who attend the New Orleans meeting. If somebody doesn't report something his company is doing that Summers has seen, Summers doesn't hesitate to bring up the subject during the weekly checkmeet.

From his flying trips and weekly checkmeets, Summers keeps a running account of information flowing to Gulf's production department about the number of wells being drilled, their location, costs, depth, and other pertinent information. His job is done when he gets, and passes on, the information.

While he and his pilot have flown through some rough weather and witnessed some raging storms, they have run into serious trouble only once.

Summers and La Grone were flying along in the Widgeon off St. Joe island when a piston in one engine blew out. Since the Widgeon can't fly on one engine, this meant a forced landing. Luckily, however, they were only about 150 ft. above the water surface when this happened. At this low altitude they were able to land without getting shaken up too much. But if the piston had blown out a few minutes earlier, when they were up about 7,000 ft., Summers might be telling a different story—or none at all—today.

Summers and La Grone treat the Widgeon with kid gloves. If any fault is suspected, the plane is grounded for inspection and, if needed, repairs.

At 42, Summers gives the impression of an easy-going, relaxed, yet energetic sort of person. He's also competitive by nature, a particularly useful characteristic for a scout.

Summers and La Grone have landed at some obscure point in the Gulf just to meet and talk with drilling crews, or even fishermen.

Married, and the father of a couple of junior high school football players, the over-6-ft. Summers says his wife didn't think too much of his flying all over the Gulf of Mexico when the job first opened up. "But she's used to the idea now," he says. "I just check in with the Gulf operator when I take off or land, and she calls my wife. I never know just where I'll be from one day to the next.

"Calling the Gulf Oil operator in Houston serves two purposes. She notifies my wife, and also, if Bo and I do take off sometime, run into trouble, and get forced down out in the Gulf, she can get somebody to start looking for us. I call the operator when we are about to take off, tell her where I'm headed, and how long it should take us to get there, then check in when we reach our destination."

Despite the brief periods he does spend around home, Summers is active in Boy Scout and Little League work in his community. Occasionally, too, he will take one of his boys (10 and 13) with him on a flying trip. But, so far, Mrs. Summers has resisted the urge to see the Gulf from on high.

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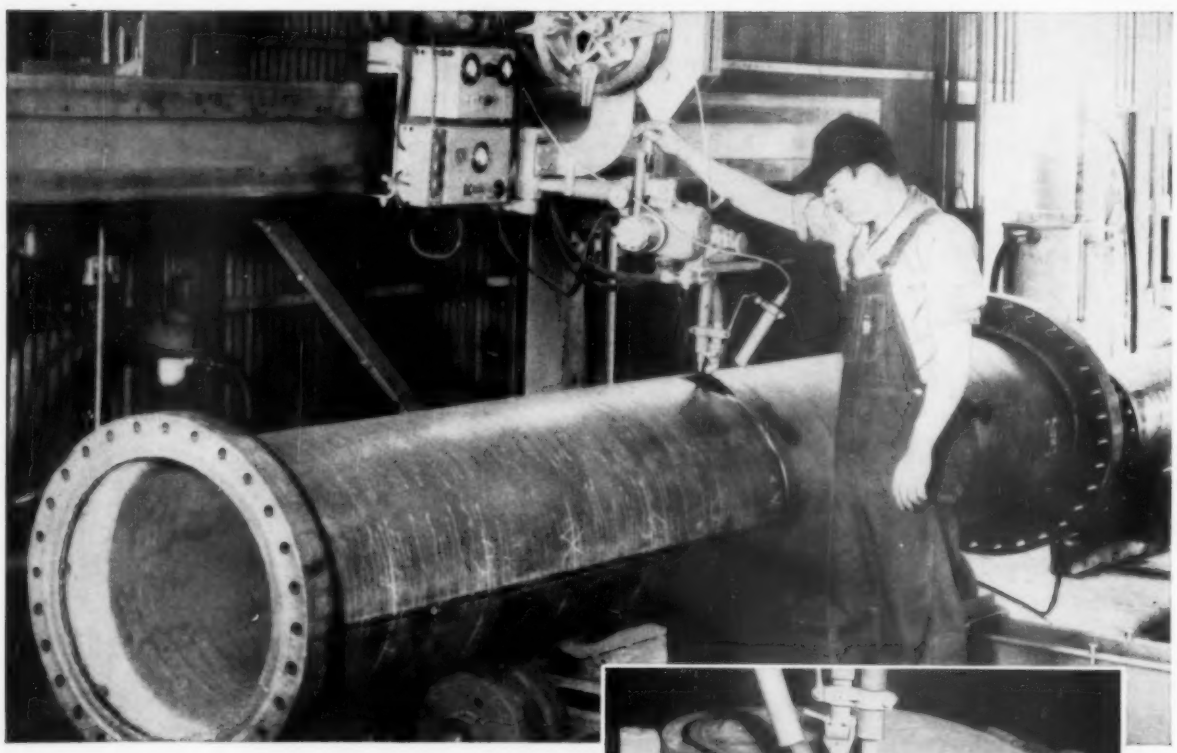

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Cold Start for New Line

Pipeline crews have just filled a teeth-chattering request for Utah Natural Gas Co. In zero weather, they connected a natural gas wildcat on Utah's snow-filled Wasatch Plateau to existing gas lines.

Snow that was 2 ft. deep in most places along the route was scraped away by the pipe crews, who laid the uncoated and unwrapped pipe on ground underneath the snow. Later, when the snow melts and the ground thaws, the pipe will first be coated and wrapped, then buried.

The 6-in.-diameter line starts at the wildcat in Sanpete County, and moves north and east to the Clear Creek gas field in Emery and Carbon counties, where it ties into an existing gas line. Actual airline distance between the two points is 4 mi., but because of the rugged terrain, 9 mi. of pipe were needed to span the points. Where it was necessary, the pipe was bent to fit the line to the contours of the plateau.

The gas discovery is No. 1-X Joes Valley, brought in by Three States Natural Gas Co. in November (PW—Dec.9'55,p18). The well's general location is about 50 mi. south of Provo, Utah.

Utah Natural wanted the line built so it could test the wildcat during adverse weather conditions.

Usually pipelines are built in spring and summer—when weather is much more to the liking of pipeliners than the weather they encountered on the plateau. But Utah Natural wanted to test the well as soon as possible. So the pipeliners complied, and built the line. In spite of the biting cold—it sometimes got as low as 10 degrees below zero—the line was laid in 15 days, and tied into existing lines early this month.

With the pipeline in operation, the well is producing about 5-million cf/d of natural gas. Initial production when the well was finaled was 15-million cf/d; since then, the well has been shut in awaiting the pipeline.

Utah Natural, a subsidiary of El Paso Natural Gas Co., transmits the gas to Mountain Fuel Supply Co. for delivery to Provo and other Utah cities.

With the pipeline in place, the development of the Joes Valley area may be accelerated. Three States will move in three more rigs this spring for more drilling.

If the area develops into a field, it will mark a new high in drilling operations: The drilling platform of Joes Valley 1-X is at an altitude of 9,725 ft. above sea level, the world's highest.

Three States says the first step in the spring drilling program will be to prove up the Joes Valley discovery. If a substantial pool is realized, Utah communities—through Utah Natural—will get first call on the gas.

There was some talk in Utah when the Joes Valley discovery came in that El Paso Natural would revive its plan to supply Northern California with Utah Gas. To do this, El Paso Natural would use its inactive subsidiary, Utah-Western Pipeline Co., to feed gas to Pacific Gas & Electric Co. But El Paso Natural says it has no immediate idea of reviving the plan.

Fill 'Er Up — With Gas or Grain

Indianhead Truck Line, Inc., of St. Paul, is using a camel-back trailer to help cut down the losses of "empty" miles' operations. On its outbound trips from the Twin Cities area, the huge, hump-backed trailer is loaded with 6,500 gal. of gasoline, stored in compartments at each end of the tubular frame. On the inbound trip, back to its starting point, the trailer hauls 20 tons of grain in the swollen mid-section. The grain compartment is empty while the trailer carries gasoline; the gasoline compartments are empty when grain is being hauled.

What's New

IN TRANSPORTATION

Southern Pacific Pipeline Co. has awarded contracts covering nearly all of the extensions it is building to serve four air force bases in California and Arizona (PW—Jan.13'56, p30). Contracts for the pipelines to three of the bases have been granted. A fourth is pending. The entire project will be completed Mar. 31 at an estimated cost of $5-million.

The military links will be completed in four sections: 86 mi. from Davis-Monthan Air Force base, near Tucson, to a point near Magma, Ariz.; 58 mi. from Magma to Williams Air Force base to a pumping station at Phoenix; 18 mi. from Phoenix to Luke Air Force base; and the pending 14-mi. unit from Colton, Calif., to March Air Force base.

■

The Federal Power Commission will hold hearings Feb. 14 on Tennessee Gas Transmission Co.'s plan to import gas from and export gas to Canada as part of its agreement with Trans-Canada Pipe Lines, Ltd. (PW—Oct. 21'55,p24). Involved in the plan is a TGT affiliate, Midwestern Gas Transmission Co., that wasn't to distribute Canadian gas to Midwest U.S. communities. Also applying to distribute gas to the same areas are American Louisiana Pipe Line Co., and Northern Natural Gas Co.

●

Operating revenues of natural gas companies for the 12-month period ended Oct. 21, 1955, jumped 17.7% over the corresponding period of 1954, according to the Federal Power Commission. Operating revenues for October, 1955, were up 16.9% over October, 1954.

Refiners Set Octane-Scale Discussion

One of the oil industry's biggest headaches—what to do about the octane scale—is set for a full-dress airing at the midyear meeting of API's Division of Refining, in Montreal next May.

The high interest within the oil industry, particularly among refiners, in this subject, prompted the program committee to add it to the already crowded schedule of the 21st midyear meeting. This planned discussion is not listed on the preliminary program for the meeting that is being mailed this week to the Refining Division members.

The discussion will definitely be included on the final program of the meeting, however, PETROLEUM WEEK learned this week.

The preliminary program for the meeting (to be held May 14-17) lists 12 technical group sessions and one open dinner meeting. The technical sessions include two on analytical research and one each on corrosion, electrical equipment, refinery instrumentation, automatic computers, refinery maintenance, fuels and lubricants, processes, smoke and fumes, waste disposal, and training.

The need for a revision in the present octane yardstick is due to the rapid advance in gasoline octane numbers, which already are pushing close to the top of the present scale. Also, there is a need for more precise ratings than those now in use for standard knock tests.

Commercial premium motor fuels now average 96 Research octane nationwide. And if automotive compression ratios continue to rise as expected, the oil industry foresees the need for 100-octane gasoline by 1958, and possibly sooner (PW—Aug.26-'55,p18).

• **Refiners** have a big stake in the octane-scale problem because of the high cost of adding more antiknock qualities to their gasoline as octane ratings reach or exceed 100. The closer the laboratory method for establishing knock ratings approximates actual road performance, the more accurately refiners can control the quality of fuels for motorists' needs. And the more accurately octane ratings can be expressed, the more refiners are spared from overproducing antiknock quality to make gasoline meet specifications.

• **Marketers** also have a big stake in any possible revisions in the octane scale. Motorists have been "sold" on octane numbers as the hallmark of quality in gasoline. So adoption of another scale would require complete re-education.

A joint oil industry-automotive industry project to find a suitable octane yardstick for expressing gasoline antiknock ratings above present 100 octane was launched last spring. The work has been conducted in comparative secrecy, and the meeting in Montreal may be the first open discussion of a possible new scale.

This research project is being conducted by the Coordinating Research Council, a joint research agency of API and the Society of Automotive Engineers. This group is considering only a yardstick for expressing fuel antiknock ratings in the range above 100 octane.

Many new yardsticks for measuring antiknock values above 100 have been proposed, but three suggested scales appear to be of most interest to the oil and automotive industries.

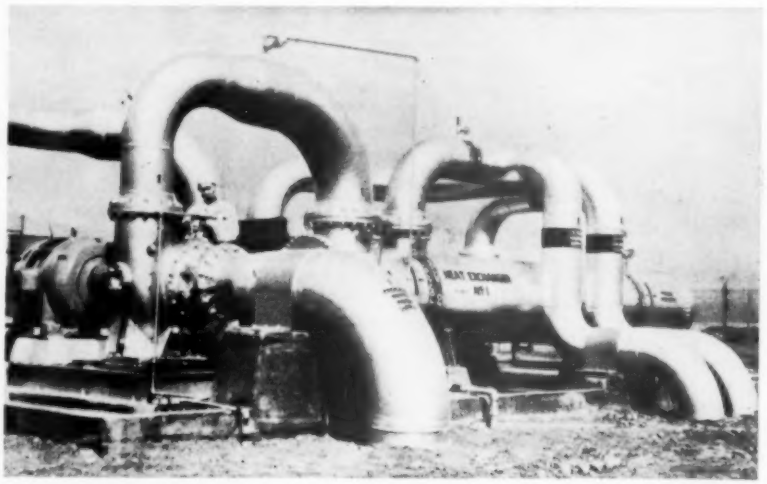
Antiknock ratings below 100 now are determined by comparing gasoline with a reference material consisting of a blend of iso-octane (with a rating of 100) and normal heptane (with a rating of 0). Ratings above 100 are now made by comparing gasoline with blends of iso-octane containing various concentrations of tetraethyl lead.

There is no problem in obtaining these 100-plus ratings. But there is a problem in how such ratings can be expressed. It can get very involved, since the extension is in terms of milliliters of TEL added to pure iso-octane.

• **One suggested scale is the adaptation of the Army-Navy system of performance numbers** for avgas above 100 to automotive engines. This proposal would substitute the presently used Motor and Research knock-test methods for the Standard Aviation and Supercharged methods used with avgas.

• **Another suggestion would be a combination of the present octane scale and the Army-Navy performance numbers.** This was made by General Motors and would work like this: The present scale would be retained for numbers below 100. For ratings above 100, the measurement would be based on performance numbers converted to octane numbers. However, in place of using full rated horsepower as the performance criterion, as is the case with avgas, GM suggests using some percentage of rated horsepower as more typical of actual automotive engine operating conditions.

• **A third proposal, made by the Coordinating Research Council over**



Using the Atom as a Heat Source

The first atomic heating unit in the country is being used at the Hanford atomic energy facilities at Richland, Wash., to heat buildings. Heat exchangers transfer heat from water used to cool atomic reactors to the heating units in nearby buildings. The use of heat exchangers avoids system contamination.

two years ago but still of high interest in the industry, would also be an extension of the present scale. For numbers over 100, CRC suggests an extrapolation of the present scale, using an equation to convert the factors of iso-octane (100), TEL content, and performance numbers, to a new 100-plus octane number.

In addition to the various proposals to extend the octane scale, moves are afoot to develop more indicative and precise antiknock ratings. Attention of the Coordinating Research Council has been called to the fact that motor fuels are approaching the level at which current procedures of the American Society for Testing Materials for determining knock rating may no longer give adequate results.

An ASTM group is working on a project to develop a new basic knock-test unit incorporating all current engineering and knock-test knowledge. Several mechanical changes in the knock-test engines have been proposed.

Humble Oil & Refining Co. presented a report to API last spring showing that savings to refiners of $12-million a year in their gasoline-manufacturing costs would be possible through more precise laboratory knock-test methods.

While the API discussion of the octane scale next May will provide a good forum to get refiners options, any changes in the present scale are likely to be slow in coming. Any method approved by the Coordinating Research Council's technical group must be approved first by the Cooperative Fuel Research Committee, then by the oil and automotive industries, and finally by ASTM, before it becomes a standard rating scale.

What's New / IN REFINING

Shale Oil: A New Method?

Denver Research Institute will try out a Swedish process for producing petroleum products from Colorado shale. The institute, affiliated with the University of Denver, last week signed a contract with Oil Shale Corp. of California to build a pilot plant in the Denver area.

The plant, with a capacity of 24 tons daily, will use a process patented by Aspengren & Co., of Stockholm. Herbert E. Linden, president of Oil Shale, says: "We hope the work, if successful, will make it possible to cut the cost of producing shale oil from the present 16¢ a gal. to a competitive figure of 13¢ a gal." An experimental oil shale plant has been operated by the U.S. Bureau of Mines at Rifle, Colo. The bureau's report on the cost of making oil from shale was a subject of controversy three years ago.

The Swedish principle is a new method of solid-to-solid heat exchange. Steel balls are heated to 1,000F and are fed into one end of a revolving drum. Raw oil shale is fed into the other end. The balls heat and crush the shale, and volatile shale oil is passed out as vapor. Some of the vapor is condensed into liquids, and some remains as gas.

Spent shale particles, coated with a coke-like carbon residue, are fed to a second drum and burned to reheat the cooling steel balls.

Corpus Christi Refining Co. is shutting down its 7,000 b/d refinery next week for six months to complete the second phase of its over-all $1.2-million modernization and expansion program.

When it goes back on stream the refinery's total capacity will be increased to 10,000 b/d with the expansion and modernization of an existing, but unused, vacuum unit. This unit will be used to process heavy crudes, possibly of Venezuelan origin, for making asphalt and road oils. A new visbreaking unit will be built, and the crude and products storage capacity will be increased by 270,000 bbl.

•

The 5,000 b/d Sheboygan (Wis.) refinery that was owned by Wisconsin Oil Refining Co. will go back on stream next month, and will be expanded later. This was announced last week following the consummation of the merger of Wisconsin Oil into Empire Petroleum Co., of Denver.

E. M. Stone, Empire president, announced that the Sheboygan refinery, which has been down for several months, will add new equipment for making all grades of road oils and asphalts. "Market surveys in eastern Wisconsin," Stone said, "indicate that the refinery can easily sell its entire production of all refined products."

HOW ISO-PLUS HOUDRIFORMING

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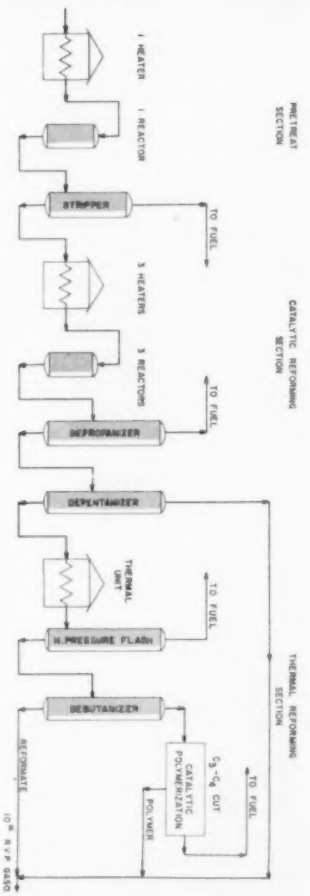
TO ECONOMICALLY PRODUCE

HIGHER OCTANE NUMBERS



Houdry Iso-Plus, utilizing existing thermal reforming equipment, offers many high-octane economies. Low-octane naphthas are readily reformed into gasolines with ratings as high as 108-octane F-1 clear. Conversion rates are extremely high. Write for process description.

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Education 'Owns' Oil Marketer

When directors of an eastern oil marketing company meet next week, they will deal, as usual, with the firm's aid-to-education program. They'll have to—the Sico Co., of Mount Joy, Pa., is in business solely to help aspiring school teachers.

Sico (rhymes with hypo) devotes its entire net earnings to a scholarship fund. This enables about 30 Pennsylvania high school students, who might otherwise have to abandon schooling, to enter state teachers colleges each year. Sico has been doing this since 1950, at a minimum cost of about $36,000 per year. And for nine years before that, the company's earnings were distributed in direct grants to the school districts of Lancaster County.

This zeal to promote education is partly because Sico shares the whole oil industry's concern about the growing shortage of scientists and technicians. "Like most companies," says Robert F. Schroll, Sico president, "we've been conscious of the diminishing number of youngsters who are tackling math, physics, chemistry, and the other so-called 'tough subjects.' And underlying this situation is the increasing lack of dedicated, qualified teachers—to accommodate the willing students and to keep the unwilling from following the paths of least resistance. That's why our directors decided to encourage enrollment in the teachers colleges."

But unlike most oil companies, Sico's aid-to-education program is aimed at the basic level of schooling—the elementary grades. "In our area," says Schroll, "that's the level that needs the most development. Furthermore, we feel that the early stages of education are most important. The high schools and colleges can't do much without good raw material. So we help students who want to teach at the elementary level."

The rest of the reason for Sico's all-out financial assistance to education is that its founder had to quit school for economic reasons. And he decided to do all he could to give other students the opportunity he missed.

Sico's founder was Clarence Schock, who died last May at the age of 89. He had to leave a teachers college as a freshman, to help promote his father's coal and lumber business in Mount Joy. Young Clarence saw great possibilities in the wooden barrels of kerosine that his father carried as a sideline. And a couple of years later, in

ROBERT F. SCHROLL heads Sico Co., a marketer that exists to aid education.

1886, he took over the business and converted it to a full-time oil marketing operation. He called in outside interests 30 years ago, so that the company could build a deepwater terminal and storage area on a 52-acre site at Wilmington, Del. But by 1941 he had regained sole ownership of the company. And that's when he dedicated Sico's profits to the school system from which he had departed, reluctantly, as a youth.

Today, Sico is actually owned by educators. A foundation formed last September, staffed mostly by school officials, owns all of Sico's physical facilities, and collects the profits and controls their disbursement. Heading the foundation, which serves as Sico's board of directors, is Albert D. Seiler, president of the Mount Joy Borough school district. The superintendent of public schools for Lancaster County also serves on the board, with the presidents of five state teachers colleges. The rest of the board is made up of a banker, a public accountant, Schroll and Sico's vice-president, and Mrs. Evetta Shock, widow of the founder.

But the company's oil marketing is not affected by this arrangement. Sico is run like any profit-making business. And it's growing just as quickly.

The firm was rechartered as a foundation simply because of tax laws. Now the operating company's business expenses are deductible, as always—but now they include rents paid to the foundation for use of the operating facilities. The foundation pays no tax on such rental income. And this saving means there's more money available for the foundation's philanthropic program.

"In effect," says Robert P. McGinley, another Sico officer, "the only difference between our company and one owned by stockholders is that our 'dividends' go to noninvestors—scholarship students."

What's New

IN MARKETING

A New York jobber may be able to reenter the National Oil Jobbers Council, even though his state association has dropped out. John Harper, past president of Empire State Petroleum Assn., was commissioned last week as an "Arkansas Traveller"—or honorary citizen—by the governor of that state. Next step expected is his enrollment in the Arkansas Petroleum Marketers Assn., a move suggested by Clint K. Elliott of that group. Elliott, new NOJC president, wants Harper to remain on the council's highway committee.

•

Rep. James Roosevelt has renewed his congressional attack on oil marketers' TBA policies. The California Democrat introduced a new bill last week, seeking to amend sections of the Clayton Act on the ground that oil companies force dealers to carry certain lines of tires, batteries, and accessories under penalty of lease-loss or other punishments. The new bill replaces and "improves upon" a similar bill he failed to get across last year.

•

Carter Oil Co. plans capital expenditures of about $3.5-million for its 1956 marketing operations in nine northern and western states. The marketing outlay is part of the company's planned 20% increase over 1955 capital expenditures.

•

Commerce Dept. figures, released last week, show that sales at service stations in the United States during 1955 totaled almost $1-billion more than in 1954. The total last year was $12.4-billion, compared with a little more than $11.4-billion for 1954.

Will this blot spread... or shrink?

NOTHING STRIKES so brutally at human lives as a slum.

Yet of America's many millions of homes, the blot that is a slum covers more than 1 out of every 10 . . . and nearly one-half of all our homes are urgently in need of repair and basic improvements.

Will the blot go on spreading? Or will a concerted, nationwide attack on the causes of slums shrink it, year by year, until it is wiped out? Today, this is a challenge to every American . . . a challenge that *must* be met.

Your community . . . your problem!

A slum reaches across blocks, across miles, to sit on your doorstep and demand a price.

You pay it in the threat of crime and juvenile delinquency to your family. You pay the price in higher personal property taxes to fight the disease and crime and poverty that are slum-bred. You pay personally when the value of your home sinks as community deterioration takes another step closer.

Your *firm* pays when the community where you do business goes downhill. Slums automatically mean lower purchasing power and less effective labor.

Good citizenship is good business

It's good citizenship and good business both for your firm to join efforts to check housing decay . . . to stop slums before they start. In fact, it's the *responsibility* of every business, as it is of every other good citizen, to support community improvement efforts.

Some slums are beyond repair. They should be torn down and a fresh start made. Others can be remodeled, made to conform to better living standards. So it is up to you to get behind every sound program which seeks to provide adequate housing for all our people.

Adding your support to the efforts of the millions already attacking the problem, your firm can help stop slums cold and put America's housing standards at a new height.

How to get into action

A group of Americans from every walk of life has formed a new, non-profit organization to help combat home and community deterioration – The American Council To Improve Our Neighborhoods . . . A.C.T.I.O.N.

Send for a free copy of "ACTION." It explains what A.C.T.I.O.N. is and proposes to do. It also lists booklets, research reports, check-lists, and other material which can help you protect the housing health of your community. Address P. O. Box 500, Radio City Station, New York 20, N. Y.

ACTION

American **C**ouncil **T**o **I**mprove **O**ur **N**eighborhoods

The Market Place

AROUND THE WORLD

Prices compiled for PETROLEUM WEEK by Platt's OILGRAM Price Service and National Petroleum News, McGraw-Hill Publications

All Prices as of January 16

Bold face type indicates changes from previous week

KEY PRICES—REFINED PRODUCTS

(¢ per gal., except dollars per bbl. where $ is shown)

Western Hemisphere

U. S. Gulf Coast, cargoes
- Gasoline, 97 oct prem. 13-13.5
- Gasoline, 90 oct reg. 11-11.5
- **Kerosine 9.375-9.75**
- **Heating oil, No. 2 ..... 9-9.25**
- **Gas oil, 48-52 d.i. 9-9.125**
- Fuel oil, bunker "C" $2.10-2.15

Caribbean, cargoes
- Avgas, Grade 100/130 ..... 16.75
- Gasoline, 93 oct research prem. 11.5
- Gasoline, 87 oct research reg. 10.5
- Gasoline, 79 oct research 9.75
- Gasoline, 70-72 oct motor method 9.5
- Kerosine 9
- Heating oil, No. 2 ..... 8.75
- Gas oil, 48-52 d.i. 8.875
- Fuel oil, bunker "C" $2.10

New York Harbor, barges
- Gasoline, 89 oct reg. 12.25
- Kerosine 10.85
- Heating oil, No. 2 ..... 10.35
- Fuel oil, No. 6 ..... $2.65

Okla.-Group 3, northern shpt, bulk
- Gasoline, 86 oct reg. 11-11.5
- Kerosine 10-10.5
- Heating oil, No. 2 ..... 9-9.25
- Fuel oil, No. 6 ..... $1.95-2.30

Chicago, bulk
- Gasoline, 86 oct reg. 12
- **Heating oil, No. 2 ..... 10.6-11**
- **Fuel oil, No. 6, high sulfur 7.65-8.5**

Los Angeles, rack
- Gasoline, 84 oct reg. 13.1-13.15
- Stove dist., PS 100 ..... 9.25-10
- Diesel fuel, PS 200 ..... 9-9.3
- Light fuel, PS 300 ..... $2.50
- Heavy fuel, PS 400 ..... $2.00

Natural Gasoline, Grade 26-70
- FOB Group 3 6
- FOB Breckenridge, Tex. 5.5

Penna Lubes
- Bright stock, 25 p.t. 22-23
- **200 vis. neutral, 25 p.t. 20-21**

Mid-Continent Lubes, Tulsa basis
- Bright stock, solvent, 95 v.i. 23-24
- Neutral, solvent, 200-210 vis. 18.75-19.75

Gulf Coast Lubes
- **Bright stock, solvent, 95 v.i. 23-25**
- **Neutral, solvent, 200 vis. 19.5-21.5**

Eastern Hemisphere

Singapore, cargoes
- Avgas, Grade 100/300 ..... 18.375
- **Gasoline, 79 oct research 10.5**
- **Gasoline, 70-72 oct motor method 10.25**
- **Kerosine 9.875**
- **Gas oil, 48 d.i. minimum 9.625**
- **Fuel oil, light $3.275**

KEY PRICES—CRUDE OIL

(2¢ differential per deg. of grav. applies except as noted)

Western Hemisphere

United States (at the well)
- Mid-Continent, 36.0-36.9 ..... $2.82
- North Dakota, 36.0-36.9 ..... 2.82
- Texas:
  - Gulf Coast, low cold test, 26.0-26.9 ..... 2.95
  - Gulf Coast, upper & lower, 26.0-26.9 ..... 2.82
  - West Texas sweet, 36.0-36.9 ..... 2.82
  - West Texas-New Mexico intermediate, 36.0-36.9 ..... 2.75
  - West Texas-New Mexico sour, 32.0-32.9 ..... 2.61
  - East Texas, flat price 2.90
  - Mirando, 28.0-28.9 ..... 2.96
- Illinois Basin, flat price 3.00
- Penna. Grade, Bradford dist., flat price 3.85
- California, Signal Hill, 21.0-21.9 ..... 2.39†
- North Louisiana-Arkansas, 36.0-36.9 ..... 2.82
- Wyoming sweet, 36.0-36.9 ..... 2.82
- Wyoming sour, 32.0-32.9 ..... 2.48

Canada (flat prices, at the well)
- Acheson-Stony Plain (Alta.) D-2, D-3, L.C. 2.54
- Leduc-Woodbend (Alta.) D-2, D-3 ..... 2.60
- Redwater (Alta.) D-3 ..... 2.49
- Daily-Mississippian (Man.) 2.34
- Smiley-Viking (Sask.) 2.26

Venezuela (Cargoes, FOB lifting port designated)
- Cumarebo, 48.0-48.9, Tucupido 3.40
- San Joaquin, 41.0-41.9, Puerto la Cruz 3.04
- Oficina, 35.0-35.9, Puerto la Cruz 2.80
- Tia Juana Medium, 26.5-26.9, Amuay 2.30*
- Bachaquero, 16.5-16.9, Amuay, Las Piedras 1.90**
- West Tarra, 40.0-40.9, Cardon 3.05
- Lagunillas Heavy, Amuay, Cardon, Las Piedras, flat price 2.05

Differential per ½ deg. grav.: (*) 2.5¢ bbl. (**) 3.5¢ bbl.
†Differential per deg. of grav. varies.

Eastern Hemisphere

Middle East, Persian Gulf (Cargoes, FOB lifting port)
- Arabian, 36.0-36.9, Ras Tanura 1.97
- Basrah, 36.0-36.9, Fao 1.92
- Iranian, 34.0-34.9, Bandar Mashur 1.91
- Iranian, 34.0-34.9, Abadan 1.86
- Iraq, 36.0-36.9, Fao 1.92
- Kuwait, 31.0-31.9, Mina-al-Ahmadi 1.72
- Qatar, 39.0-39.9, Umm Said 2.06

Middle East, E. Mediterranean
- Arabian, 36.0-36.9, Sidon 2.39
- Iraq, 36.0-36.9, Tripoli, Banias 2.39

Far East (Cargoes, FOB Lutong, Sarawak)
- Seria Light, 37-38 ..... 2.60

KEY TANKER RATES

(Last paid, per long ton, single voyage)

- **U. S. Gulf-New York, clean .. (USMC +75%) $4.99**
- **U. S. Gulf-New York, dirty .. (USMC +35%) $3.85**
- NWI-USNH, dirty ..... (USMC +10%) $2.97
- **NWI-UK/Continent, dirty ... (Scale +35%) 40/8***
- **Per. Gulf-UK/Cont., dirty .. (Scale +25%) 66/–***
- **Per. Gulf-USNH, dirty ..... (USMC –25%) $9.52**

**Sterling*

The Market Trend

For Oil Marketers: A Wide, Wide World

How's your geography? Oil markets put on a worldwide show last week. There were price advances in the Far East. Uruguay came in the market for four year's supply of crude. Argentina is paying higher prices for lubricating oils. There were processing deals in Japan, and price increases for heating oils at the Gulf, and for heavy fuel oils in the Middle West.

You may need an atlas to spot Sungei Gerong in Sumatra. It's 50 mi. up the Moesi River, near Palembang. That's where Standard-Vacuum made general price increases—0.125¢ to 0.375¢ a gal.—in its Far East cargo listings. This was one more move that had oil men wondering what makes prices tick in the Orient (PW—Jul.29'55,p9). Standard said the move was dictated by higher prices recently at the U. S. Gulf, "plus changes in freight factors." Presumably the freight factors were behind the 0.125¢ increases in avgas and motor fuel, for these prices recently have been unchanged at the Gulf. Across the Strait of Malacca, at Singapore, Shell increased most of its cargo prices 0.25¢ to 0.5¢ a gal.

Uruguay got on the world crude oil map last week. ANCAP, the country's oil agency, is looking for 17.8-million bbl. of crude oil over the next four years. It's a sure bet that international oil companies will be in there battling for the business, for the largest item Uruguay wants is 15.3-million bbl. of naphthenic and/or gasoline-enriched crude. International companies have plenty of crude and plenty of gasoline. Feb. 10 will tell the story. That's when the bids will be opened—publicly for the first time in Uruguay's history—in Montevideo.

Argentina is looking for lubricating oils in the U. S., and it will probably be paying 1.3¢ to 2.31¢ a gal. higher this year than last. U. S. refiners offered 500 solvent neutral oil at 23.31¢ and solvent bright stock at 25¢, f.o.b. ship at the Gulf. They add that lube stocks in the U. S., now somewhere around 8-million bbl., are thought to be about 1-million bbl. below "working stocks." Ergo: higher prices.

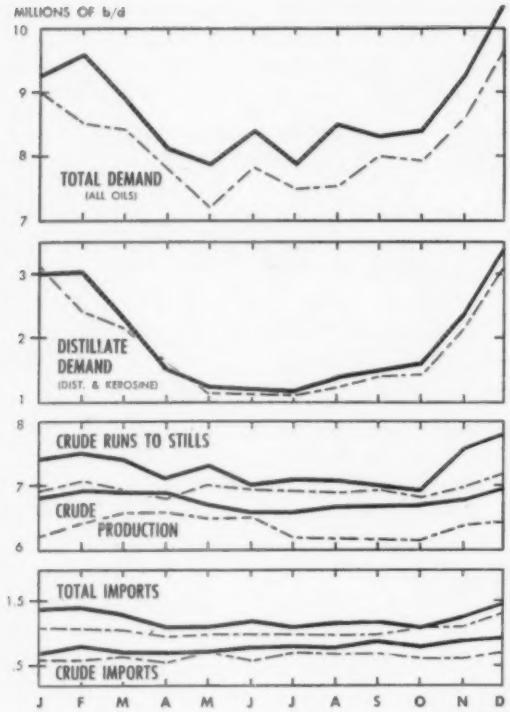
Just how hard it is for refiners to hold their product sales in foreign countries shows up plainly in the Orient. In Japan, a marketer who accounts for about 8% of that country's sales is cutting down on product imports. Right now, the marketer is buying some Middle East crude to be processed by several refiners in Japan. Eventually, when the marketer builds his own refinery, he'll be a buyer of crude oil exclusively. Other Far East sellers increasingly are moving crude, rather than products, to countries where they market. One company that recently completed several refineries East of Suez plans another one—probably to be spotted in the Philippine Islands.

Distillates: Lots of price increases last week. Gulf Coast cargo prices for kerosine were up 0.375¢ to 9.375¢, and No. 2 up 0.25¢ to 9¢. In metropolitan Chicago, Indiana Standard raised its light fuel oil tank wagon prices 0.2¢. In Ohio, Standard of Ohio advanced its heating and diesel oil prices 0.3¢. At New York harbor, a trader reported he was unable to pick up a measly 15,000 bbl. of kerosine—nobody was willing to sell.

Resid: Is the East Coast resid supply covered for this winter? Some sources think so. A major importer started to bring in higher-gravity Venezuelan crudes than recently—a move that suggests increased emphasis on gasoline. But Chicago retail No. 6 prices are pointed 0.25¢ higher.

PETROLEUM WEEK'S

Fingertip Figures



TOTAL DEMAND

Latest 4-week average	10.225
Year ago	9.302

DISTILLATE DEMAND

Latest 4-week average	3.323
Year ago	2.511

RUN TO STILLS

Latest week	7.949
Previous week	8.020
Year ago	7.370

CRUDE PRODUCTION

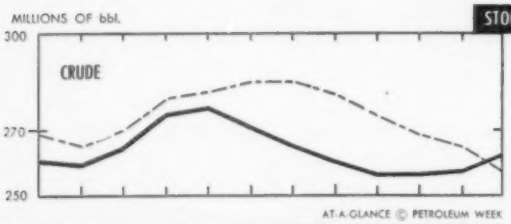
Latest week	7.014
Previous week	7.026
Year ago	6.689

TOTAL IMPORTS

Latest week	1.190
Previous week	1.489
Year ago	1.217

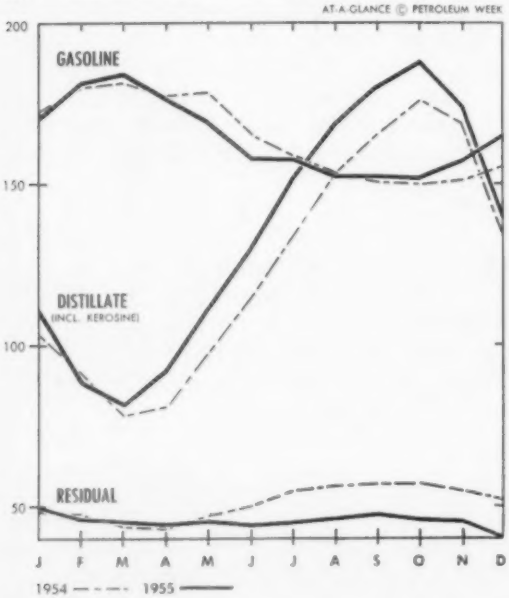
CRUDE IMPORTS

Latest week	.696
Previous week	.818
Year ago	.637



CRUDE STOCKS

Week ended 1-6	260.1
Previous week	262.0
Year ago	259.5



GASOLINE

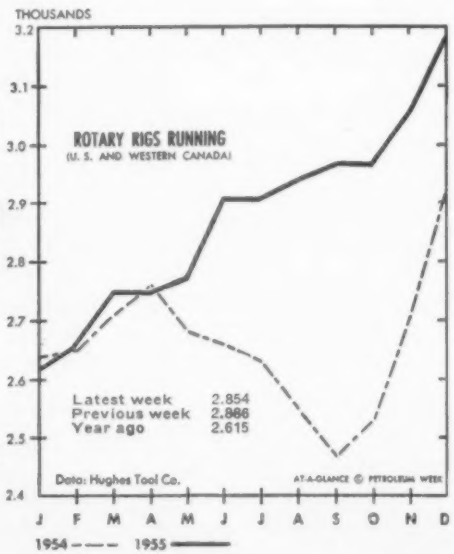
Latest week	171.9
Previous week	169.0
Year ago	162.2

DISTILLATES

Latest week	125.5
Previous week	133.6
Year ago	127.8

RESIDUAL

Latest week	39.3
Previous week	39.7
Year ago	50.6


THOUSANDS
ROTARY RIGS RUNNING
(U. S. AND WESTERN CANADA)
Latest week 2,854
Previous week 2,886
Year ago 2,615
Data: Hughes Tool Co.
AT-A-GLANCE © PETROLEUM WEEK
J F M A M J J A S O N D
1954 ---- 1955

DOMESTIC CRUDE OIL OUTPUT in the first quarter of this year will probably reach a new record, averaging a little above 7-million b/d. This was pretty much assured Wednesday when the Texas Railroad Commission set the February allowable crude oil production at a new high of 3,388,478 b/d.

Assuming that the other states that prorate crude production will be guided by the optimistic first-quarter demand estimates on which the Texas commission based its February allowable, daily average domestic crude oil production will set a new all-time high —above even the new record that's expected to be set this month. Domestic crude oil output during the first two weeks of January averaged 7,020,000 b/d, or about 60,000 b/d above the previous record, reached in December.

Barring unusual changes in the trend of the weather so far this winter, petroleum demand in the first quarter is expected to average near 9,700,000 b/d. Such an optimistic outlook, plus the sharp decline in heating oil inventories during the past month and the current low level of crude oil stocks, were the reasons for the higher Texas allowable for February.

Due to colder weather this winter, current stocks of distillates are 1.8% below a year ago. At the start of the season, these stocks were 10% higher than a year previous.

HARRISON B. HANEY has been named Tide Water Associated Oil Co.'s manager of transportation. Haney joined Associated Oil Co., Tide Water's predecessor, in 1917, and in 1936 was appointed Tide Water's western division transportation manager. He was elected vice-president in 1949.

SAMUEL B. FRAZIER has been named manager of the newly established Appalachian exploration area of Gulf Oil Corp., at Charleston, W. Va. He will be transferred from his position as zone geologist of the Kansas-Eastern zone at Wichita, Kan. **Charles F. Bassett,** zone regional geologist at Wichita, succeeds Frazier. Frazier has been with Gulf since 1950; Bassett joined the company in 1943.

F. L. NELSON has been promoted to field superintendent for Stanolind Oil & Gas Co.'s Luby area, near Corpus Christi. He formerly was assistant division engineer at Houston. **M. Scott Kraemer,** Houston district engineer, succeeds Nelson, and **Jack McWilliams,** senior district petroleum engineer, succeeds Kraemer.

E. T. W. HALL has been promoted from manager of coordination and office management for Mid-Continent Pipe Line Co. to chief job analyst in the employee relations department of Sunray Mid-Continent Oil Co., parent company of Mid-Continent. Hall has been with Mid-Continent since 1939. **George F. Tongue** has been promoted from assistant to the chief engineer at Mid-Continent to Hall's former position. Tongue started with Mid-Continent in 1947. **Clinton A. Sayles,** district engineer at Wewoka, Okla., and a company employee since 1950, replaces Tongue. **Charles D. Pass,** civil engineer with Mid-Continent, and an employee of the company since 1949, replaces Sayles as district engineer.

HAL R. ADAMS has been promoted from division geophysicist for Sohio Petroleum Co. at Billings, Mont., to manager of the northwest exploration division.

C. C. COMBS has been elected vice-president and treasurer of Shell Pipe Line Corp. Houston, succeeding **W. A. Baker,** who retired Jan. 1. Combs joined Shell in 1923, and, since 1950, he has been on special assignments, including three years as controller of Shell Oil Co. of Canada, Ltd.

D. W. MATTHEWS has been promoted from assistant district superintendent at Ardmore, Okla., for Continental Oil Co. to superintendent of the company's newly formed Oklahoma City production district. **H. B. Steves,** of Wichita, Kan., will be district engineer, and **C. C. Yeakley, Jr.,** of Oklahoma City, will be chief clerk of the new district. Drilling foremen for the district will be **B. F. Comstock** and **P. G. O'Neal,** both of Oklahoma City. Production foremen will be **Tom Sutton,** of Edmond, Okla.; **A. G. Harrell,** of Tecumseh, Okla.; and **Edgar Whitehead,** transferred from Ponca City, Okla., to the new district.

HERB SCHAFER II has been promoted from production superintendent at Cushing, Okla., for Kidd Williams Drilling Corp. to assistant to the company's president, **O. D. Williams,** at Tulsa.

ROY W. REESE has joined Service Drilling Co. as area superintendent at Borger, Texas. He recently resigned as Stinnett (Tex.) district engineer for Amerada Petroleum Co.

JAMES KIRKPATRICK will head Service Drilling Co.'s land department, at Tulsa. Kirkpatrick was formerly with the First National Bank & Trust Co. of Tulsa.

S. HOWARD LEE will manage the Corpus Christi sales district of Humble Oil & Refining Co. He has been plant superintendent at Humble's Houston package and products terminal. He replaces **J. Ben Whittenburg, Jr.,** who was recently named sales manager in the Odessa-Midland area.

M. E. SWAIM (left) has been promoted from general manager of oil field sales for National Supply Co. to the newly created position of general manager of sales and **THOMAS B. HERNDON** (right), sales manager of the production department, will succeed him. Swaim joined National Supply in 1925; Herndon started with the company in 1936.

P. N. JOHNSON has been named president of Salt Lake Refining Co. and Salt Lake Pipe Line Co., both subsidiaries of Standard Oil Co. of California. Johnson joined California Standard in 1939, and for the past several months has been on special assignment with the company's manufacturing department. Just before that, he was superintendent of the company's El Segundo (Calif.) refinery. Johnson replaces **J. T. Higgins,** who is being advanced to assistant general manager of California Standard's manufacturing department.

EDGAR H. CLAYTON has been appointed vice-president and general manager of Colombia Cities Service Petroleum Corp., Bogota. He will be in charge of developing the El Carare area, comprising 2.2-million acres of oil land. He will be assisted by **Zenas Stucky,** former manager of exploration operations for Canada-Cities Service Petroleum Corp., Calgary. Stucky will be succeeded by **Don Anderson,** who has been superintendent of oil operations for the past four years at Calgary. Anderson will supervise all operations of the Canadian company—including production and exploration. He joined Cities Service in 1930.

ROBERT J. FITZPATRICK, former vice-president of Albert Frank-Gunther Law Inc., New York City public relations counseling and advertising firm, has joined Texas Eastern Transmission Corp. at Shreveport as director of public relations. He had been with Albert Frank-Gunther Law since 1941. He replaces **Jack Clarke,** who resigned recently.

GORDON LEFEBVRE, former president of Cooper-Bessemer Corp., Mt. Vernon, Ohio, has joined Clark Bros. Co., New York, in an executive advisory capacity. Prior to joining Cooper-Bessemer in 1941, he had been general manager of the diesel division of the American Locomotive Corp. at Auburn, N. Y. Clark Bros.

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BUSINESS OPPORTUNITIES

Use this Classified Advertising Section for bringing business needs or opportunities to the attention of men associated in administrative, executive, management, sales and responsible technical, engineering and operating capacities within the oil industry.

PETROLEUM WEEK

is a division of Dresser Industries, Inc.

JUSTIN S. McCARTY, JR., chairman of the trust department of the Texas Bank & Trust Co., Dallas, has been elected to the board of directors of Landa Oil Co., Dallas.

ROBERT E. LAND has been promoted from engineer in the marine department of Warren Petroleum Corp., Tulsa, to assistant manager of the department.

WALTER SCHAEFER has been named special assistant for fiscal policy to the Director of the International Cooperation Administration. Schaefer was assistant comptroller of Standard Oil Co. (N. J.) before his retirement in 1950.

RAY T. SOPER has become a sales representative for the export division, at New York City, of National Supply Co. Soper formerly was with Mene Grande Oil Co. and Creole Petroleum Corp.

DR. W. J. SWEENEY, vice-president of Esso Research Co., New York, has been elected American Petroleum Institute representative to the American Standards Assn. board of directors. He will serve three years.

HUNTER E. AKARD, of Dallas, assistant general agent for the Texas Pacific Land Trust, has been appointed general agent. He succeeds **Ray McDowell,** who has held the position since 1932, and recently resigned. Akard joined Texas Pacific in 1942, and was appointed assistant general agent in 1948.

JAMES R. KEITH, assistant vice-president and assistant general manager of the refining division of California Texas Oil Co., Ltd., has been named general manager of Bahrain Petroleum Co., Ltd., an associated company of Caltex. He replaces **Carlton R. Barkhurst,** who will assume new duties with Caltex's refining division. Keith started with The Texas Co. in 1929, and joined the Caltex group of companies in 1936. Barkhurst also joined Texaco in 1929, and was assigned to Bahrain in 1937.

JOHN E. YOUNG has been named administrative assistant to the vice-president of Shell Oil Co.'s Pacific Coast area exploration and production department at Los Angeles. He had been senior analyst in charge of salary administration for the personnel department in the same city. He succeeds **Stanley H. Oatway,** who retired last week after 30 years with Shell. Oatway served 10 years as assistant to the executive vice-president at San Francisco before coming to Los Angeles. Shell also announced two other retirements last week: **E. W. Masters,** executive assistant to the Pacific Coast area vice-president at Los Angeles, retired at the year's end after 30 years of service. He joined the company in 1926 as a production engineer, and later served in various capacities at Ventura, Bakersfield, and the Los Angeles basin. **Walter C. Roberts,** since 1946 manager of Shell's West Coast pipeline operations, at Los Angeles, retired during the holiday season after 40 years of service.

HAL S. PHILLIPS, president of Delta Tank Mfg. Co. since 1946, has been elected chairman of the board, and **Kenneth H. Gayle, Jr.,** former president of Ingalls Iron Works Co., Birmingham, Ala., has been elected president in Phillips' place. Phillips will continue to serve as treasurer of General Gas Corp., parent company of Delta Tank.

J. G. JIMENEZ has been named marketing manager of Tide Water Associated Oil Co.'s eastern division, at New York. He joined Tide Water in 1930 as a tank-truck salesman, and later served at Salem, Mass. as area sales manager, and as district automotive products sales manager. He came to New York City in 1954 as assistant divisional marketing manager.

W. J. McWILLIAMS has been elected vice-president of Republic Supply Co., Oklahoma City. He had been corporation secretary and assistant to the president. McWilliams will be in charge of purchasing, inventory management, personnel, traffic, safety, and real estate.

SETH W. CANDEE, employee relations supervisor of Tide Water Associated Oil Co.'s eastern division, at New York, has retired after 30 years of service. He started with the company in 1925 as head of the personnel and industrial relations department for Tide Water Oil Co. In 1936, when Tide Water and Associated Oil were merged, he was named supervisor of the eastern division employee relations department, and has kept this post since then.

WALTER HENRY NELSON, a member of Amercan Petroleum Institute's information department, will edit the API Quarterly. He succeeds **Eloise Michel,** who retired. He will be assisted by **Edward D. Mellinger,** who has been appointed consulting editor.

W. T. THAGARD III will direct plans and economic research for Texas Eastern Transmission Corp., Shreveport. Thagard has been with Texas Eastern since 1947 when he joined the company as an administrative engineer.

BOYD GUTHRIE, superintendent of the federal government's oil-shale experiment station at Rifle, Colo., has been transferred to the petroleum and oil-shale experiment station at Laramie, Wyo. Guthrie has headed the Rifle project since it started in 1944; he will be supervisory chemical engineer in his new assignment.

PAUL G. JAMESON, commercial manager of the St. Louis division of Shell Oil Co., has been promoted to the aviation department in the company's head office in New York.

ROBERT B. BOSSLER has been named professor of petroleum engineering at Texas A. & M. College. Bossler formerly was vice-president of Brundred Oil Corp., Oil City, Pa. He has been a director of the Pennsylvania Crude Oil Assn. since 1954.

HAROLD G. MANGELSDORF (left) has been elevated to the executive committee and **J. PRINCE WARNER** (right) has been named to replace him as general manager of manufacturing for Esso Standard Oil Co. Mangelsdorf started with Esso Standard in 1934 at the company's Baton Rouge refinery. He was elected to the company's board of directors in June, 1954. Warner, who started with Esso Standard in 1928, also at Baton Rouge, has been superintendent of manufacturing at Esso's Baltimore refinery for the past year.

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Edward A. Callahan, Jr.
350 Park Square Bldg.
Hubbard 2-7160

Chicago 11
G. L. Hackley, Jr.
W. F. Holbrook
520 North Michigan Avenue
Mohawk 4-5800

Cleveland 15
J. E. MacArthur
1510 Hanna Bldg.
Superior 1-7000

Houston 25
David G. Sawyer
724 Prudential Bldg.
Jackson 6-1281

Los Angeles 17
William C. Woolston
1111 Wilshire Blvd.
Madison 6-4323

New York 36
Edward A. Callahan, Jr.
Donald R. Thompson
330 West 42nd Street
Longacre 4-3000

Philadelphia 3
W. A. Potter
Architects Building
Rittenhouse 6-0670

San Francisco 4
T. Evans Wyckoff
68 Post Street
Douglass 2-4600

Tulsa 19
J. A. Hartley
209 Constantine Bldg.
611 South Boston
Gibson 7-7767

Is This the End For Big-Union Dream?

Jack Knight's Oil, Chemical & Atomic Workers Union has had big dreams of becoming the world's largest union, big enough to hold the oil industry in the palms of its hands.

When its efforts to "merge" with other oil unions failed a couple of years ago, it set out to pick off the independent unions, one by one. And its first carefully chosen target was Indiana Standard's Big Whiting (Ind.) refinery.

Knight had several reasons for concentrating all his fire on Whiting. Not only is it Indiana Standard's biggest refinery, but collective bargaining contracts there often set the pattern for the industry. More importantly, Whiting workers seemed to be ripe for the picking: They had just split off from the Central States Petroleum Union, which long had represented all of the company's plants. What better starting point, then, for winning over other Indiana Standard workers!

Last week was the showdown. The Whiting employees voted on whether to continue to be represented by the fledgling Independent Petroleum Workers of America or to switch to Knight's union.

The result was a jarring one for Knight. Even though OCAW made an all-out effort, with Knight personally taking a hand, it was beaten by a margin of better than four to one. Overwhelmingly the workers rejected OCAW's claims that only it could adequately represent them; that the pathway to greater security lies in every oil worker belonging to the same union.

On the basis of the Whiting election, it looks as if Knight is going to have slim pickings in his efforts to grab off the independent oil unions. OCAW may have to wait quite a spell before becoming the world's biggest union.

A Fine P.R. Job

Oil men in high places apparently are taking to heart some of the bitter public relations lessons of the past. Evidence is Texaco's new campaign to tell motorists in Michigan why they pay higher gasoline prices than motorists in some other states. Texaco is distributing 100,000 pamphlets to car owners, legislators, and dealers (page 26).

First, there's not a line in the pamphlet about how big the oil industry is. Nor are there any of the other commonly accepted generalizations about how oil serves the nation. Texaco sticks to the facts about gasoline prices. And it's prices that have been causing the trouble in Michigan.

Second, Texaco is taking the trouble to have its sales representatives explain the price matter to dealers—the men who meet the public. Texaco is thus showing its awareness that you can't get a message across if part of the industry is pulling the other way.

Third, Texaco is acting before a harmful law gets through the legislature—in this case a proposal for utility control of oil.

The company is not the only firm to take such action recently; others have been busy, both in Michigan and elsewhere. But the job Texaco is doing is this week's hopeful sign.

If enough oil companies meet criticism—in enough places—with enough facts—the industry may wake up some day to find all the people on its side.

TWO WAYS TO LOOK AT THE WHITE 3000

...and they both add up to *EXTRA* earning power

FROM THE DRIVER'S SEAT:

"I drive a White 3000 in heavy Chicago traffic with lots of "stop-and-go" miles. What I especially like about driving the "3000" is the maneuverability and steering ease. Visibility is excellent.

"The cab is comfortable and it drives like a passenger car. It has what it takes regardless of how many miles it has been driven, year after year. Another advantage shows up on preventive maintenance and inspection. There's much less downtime because of the power-lift cab."

Sam Hanna
Driver
TRANSPORT SERVICE CO.
Chicago, Ill.

FROM THE OPERATOR'S DESK:

"There's an outstanding payload advantage in the White 3000 for petroleum transporters. We're constantly looking for ways to increase our payload—we get about 2,000 additional pounds legally because of the White weight distribution and favorable dimensions.

"We are hauling about 100 different liquid products in the Chicago area to bulk stations or retail outlets. We are tremendously impressed with the ability of the Whites to stand up under the rough city traffic, for more years than other makes."

John V. Crowe, Jr.,
Vice President
TRANSPORT SERVICE CO.
Chicago, Ill.

This White Model 3024 PLT has 110 inch wheelbase, 10.00 x 20 tires, 6,000 gallon tanker.

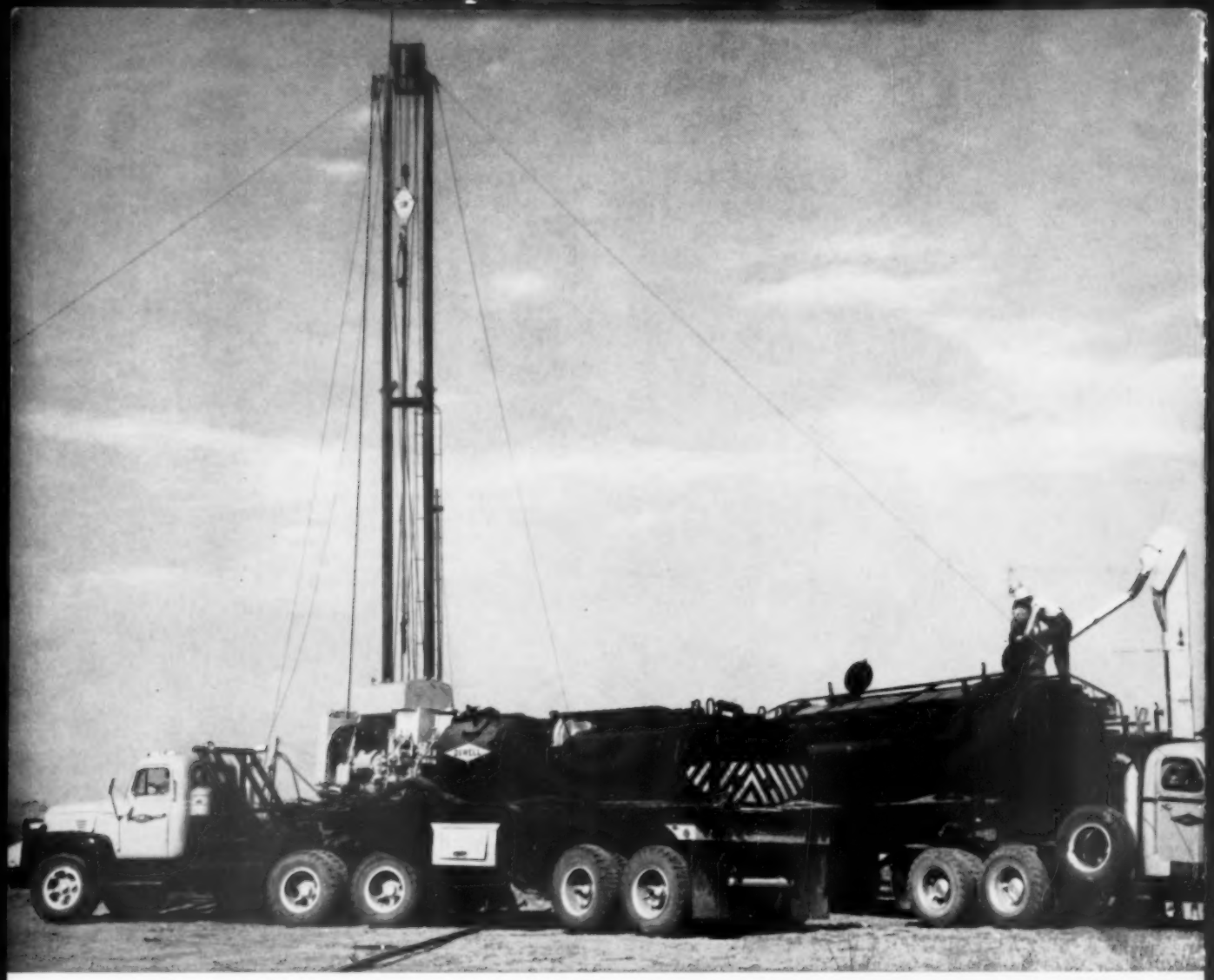
FIRST—IN THE FIELD

White 3000

PROVED IN BILLIONS OF LOW-COST MILES

THE WHITE MOTOR COMPANY
Cleveland 1, Ohio

FOR MORE THAN 50 YEARS THE GREATEST NAME IN TRUCKS



Dowell's paddle mixing equipment supplies a constant flow of properly mixed materials to the large-volume pumps.

FRACTURE AND ACIDIZE IN ONE ECONOMICAL TREATMENT!

ACID PETROFRAC* is an exclusive Dowell fracturing treatment with double action for better results with less rig time. It uses an acid-in-oil emulsion to fracture and acidize in one operation. Acid constitutes 90 to 95% by volume of the total mixture. The oil phase may be kerosene, diesel oil or crude oil.

Its high acid content with retarded acid properties means deeper penetration, extended drainage pattern and increased permeability. Sand carrying ability is high, up to 6 pounds per gallon—even at high temperatures.

Dowell engineers tailor each Acid Petrofrac treatment to fit your well requirements. Fluids can be premixed or prepared at the well site in Dowell's paddle mixing equipment. The mixture can be regulated to obtain the proper viscosities and fluid loss. Properties which prevent the swelling of silicates in the spent acid solution are inherent in Acid Petrofrac. No gel-breaker is needed. No shut-in time is required.

For more information or service, call any of the 165 Dowell offices in the United States and Canada; in Venezuela, contact United Oilwell Service. Or write to Dowell Incorporated, Tulsa 1, Oklahoma, Department A-75.

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